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No.

In the Supreme Court of the United States

ALBERTO R. GONZALES, ATTORNEY GENERAL,
PETITIONER

v.

LEROY CARHART, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT

APPENDIX TO THE PETITION FOR A WRIT OF CERTIORARI

(VOLUME 1)

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APPENDIX A

UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

No. 04-3379

LEROY CARHART, M.D., ON BEHALF OF THEMSELVES AND THE PATIENTS THEY SERVE; WILLIAM G. FITZHUGH, M.D., ON BEHALF OF THEMSELVES AND THE PATIENTS THEY SERVE; WILLIAM H. KNORR, M.D., ON BEHALF OF THEMSELVES AND THE PATIENTS THEY SERVE; JILL L. VIBHAKAR, M.D., ON BEHALF OF THEMSELVES AND THE PATIENTS THEY SERVE,
APPELLEES

v.

ALBERTO GONZALES, IN HIS OFFICIAL CAPACITY AS ATTORNEY GENERAL OF THE UNITED STATES, AND HIS EMPLOYEES, AGENTS, AND SUCCESSORS IN OFFICE,
APPELLANT

AND SUSAN FRIETSCHE; DAVID S. COHEN; STACEY I. YOUNG, INTERESTED PARTIES, MARGIE RILEY, ET AL., AMICI ON BEHALF OF APPELLEE

July 8, 2005

Before LOKEN, Chief Judge, FAGG, and BYE, Circuit Judges.

BYE, Circuit Judge.

This case presents a challenge to the federal Partial-Birth Abortion Ban Act of 2003, Pub.L. No. 108-105, 117

Stat. 1201 (codified at 18 U.S.C. § 1531). The day the President signed the Act into law, plaintiffs filed suit in the United States District Court for the District of Nebraska seeking an injunction against enforcement of the Act. After a trial, the district court[1] held the Act unconstitutional on several grounds. The government appeals. We affirm the judgment of the district court.

I

A

In 2000, the Supreme Court handed down its decision in *Stenberg v. Carhart*, 530 U.S. 914, 120 S. Ct. 2597, 147 L.Ed.2d 743 (2000), which found Nebraska's partial-birth abortion ban unconstitutional for two separate reasons. First, the Court determined the law was unconstitutional because it did not contain an exception to preserve the health of the mother. Second, the Court determined the law was worded so broadly it covered the vast majority of late-term abortions and thus imposed an undue burden on the right to abortion itself.

In the eight years before the Court's decision in *Stenberg*, at least thirty states passed laws banning partial-birth abortions. *See id.* at 983, 120 S. Ct. 2597 (Thomas, J., dissenting). In 1996 and 1997, Congress enacted prohibitions on partial-birth abortions, however, President Clinton vetoed them. *Id.* at 994 n. 11, 120 S. Ct. 2597 (Thomas, J., dissenting). In 2003, Congress enacted, and President George W. Bush signed, the Partial-Birth Abortion Ban Act of 2003. The Act exposes "[a]ny physician who, in or affecting interstate or foreign commerce, knowingly performs a partial-

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[1] The Honorable Richard G. Kopf, Chief Judge, United States District Court for the District of Nebraska.

birth abortion and thereby kills a human fetus" to up to two years of imprisonment. 18 U.S.C. § 1531(a). The Act goes on to define a "partial-birth abortion" as an abortion in which the person performing the abortion:

> (A) deliberately and intentionally vaginally delivers a living fetus until, in the case of a head first presentation, the entire fetal head is outside the body of the mother, or, in the case of a breech presentation, any part of the fetal trunk past the navel is outside the body of the mother, for the purpose of performing an overt act that the person knows will kill the partially delivered living fetus; and
>
> (B) performs the overt act, other than completion of delivery, that kills the partially delivered living fetus. . . .

Id. § 1531(b)(1).

The Act contains an exception allowing the performance of "a partial-birth abortion that is necessary to save the life of the mother." *Id.* § 1531(a). The Act does not, however, contain an exception for the preservation of the health of the mother.

Presumably recognizing that the Act is similar (though not identical) to the Nebraska law found unconstitutional in *Stenberg*, Congress made several findings and declarations in the Act. Congress "f[ound] and declare[d]" that "under well-settled Supreme Court jurisprudence, the United States Congress is not bound to accept the same factual findings that the Supreme Court was bound to accept in *Stenberg*." Partial-Birth Abortion Ban Act of 2003 § 2(8), 117 Stat. at 1202. Congress concluded that a "moral, medical, and ethical consensus exists that the practice of performing a

partial-birth abortion . . . is a gruesome and inhumane procedure that is never medically necessary and should be prohibited." § 2(1), 117 Stat. at 1201. In addition to determining there is "substantial evidence" that partial-birth abortions are never medically necessary, Congress also concluded partial-birth abortions "pose [ ] serious risks to the health of the mother undergoing the procedure." §§ 2(13), 2(14), 117 Stat. at 1203-04.

After a trial, the district court found the Act unconstitutional on two separate grounds. First, the district court concluded Congress's finding regarding a medical consensus was unreasonable and thus the Act was unconstitutional due to its lack of health exception. Second, the district court concluded the Act covered the most common late-term abortion procedure and thus imposed an undue burden on the right to an abortion.

B

The procedures in question in this case are used during late-term abortions and we therefore must, for context, present some basic information regarding these procedures. There are three primary methods of late-term abortions: medical induction; dilation and evacuation (D & E); and dilation and extraction (D & X). In a medical induction, formerly the most common method of second-trimester abortion, a physician uses medication to induce premature labor. *Stenberg*, 530 U.S. at 924, 120 S. Ct. 2597. In a D & E, now the most common procedure, the physician causes dilation of the woman's cervix and then "the physician reaches into the woman's uterus with an instrument, grasps an extremity of the fetus, and pulls." *Women's Med. Prof'l Corp. v. Taft*, 353 F.3d 436, 439 (6th Cir. 2003). "When

the fetus lodges in the cervix, the traction between the grasping instrument and the cervix causes dismemberment and eventual death, although death may occur prior to dismemberment." *Id.* This process is repeated until the entire fetus has been removed.

D & X and a process called intact D & E are what are "now widely known as partial birth abortion." *Id.* In these procedures, the fetus is removed "intact" in a single pass. If the fetus presents head first, the physician collapses the skull of the fetus and then removes the "intact" fetus. *Stenberg*, 530 U.S. at 927, 120 S. Ct. 2597. This is what is known as an intact D & E. If the fetus presents feet first, the physician "pulls the fetal body through the cervix, collapses the skull, and extracts the fetus through the cervix." *Id.* This is the D & X procedure. "Despite the technical differences" between an intact D & E and a D & X, they are "sufficiently similar for us to use the terms interchangeably." *Id.* at 928, 120 S. Ct. 2597.

II

As a preliminary matter, although the plaintiffs purported to bring a facial challenge to the Act, the district court expressed confusion over whether its judgment declared the Act facially unconstitutional or unconstitutional as applied to the plaintiffs. *See Carhart v. Ashcroft*, 331 F.Supp.2d 805, 1042-47 (D. Neb. 2004) (stating the district court "do[es] not know" if its ruling was facial or as applied and leaving "that for others to determine"). This is a question of law and we therefore review it *de novo*. *See, e.g., United States v. Jeffries*, 405 F.3d 682, 684 (8th Cir. 2005). The traditional standard for evaluating a facial challenge was set forth in *United States v. Salerno*, 481 U.S. 739, 107 S. Ct. 2095,

95 L.Ed.2d 697 (1987). In *Salerno*, the Supreme Court explained that a "facial challenge to a legislative Act is, of course, the most difficult challenge to mount successfully, since the challenger must establish that no set of circumstances exists under which the Act would be valid." *Id.* at 745, 107 S. Ct. 2095. In *Stenberg*, however, the Supreme Court struck down Nebraska's partial-birth abortion ban as facially unconstitutional without applying the *Salerno* standard. In fact, the approach taken in *Stenberg* was fundamentally inconsistent with *Salerno's* "no set of circumstances" test in that it regarded rarity of the need for a particular procedure as "not highly relevant." *Stenberg*, 530 U.S. at 934, 120 S. Ct. 2597. The *Salerno* test is also inconsistent with the general undue burden analysis for abortion statutes set forth in *Planned Parenthood v. Casey*, 505 U.S. 833, 112 S. Ct. 2791, 120 L. Ed.2d 674 (1992). This has led the vast majority of circuit courts to apply these abortion-specific standards in place of *Salerno*. *See Planned Parenthood of N. New England v. Heed*, 390 F.3d 53, 57-59 (1st Cir. 2004) (collecting cases), *cert. granted sub nom. Ayotte v. Planned Parenthood*, ___ U.S. ___, 125 S. Ct. 2294, ___ L.Ed.2d ___ (May 23, 2005); *Richmond Med. Ctr. for Women v. Hicks*, 409 F.3d 619, 627-28 (4th Cir. 2005) (same). We have previously declined to apply the "no set of circumstances" test in the context of facial challenges to abortion restrictions in *Planned Parenthood, Sioux Falls Clinic v. Miller*, 63 F.3d 1452, 1458 (8th Cir. 1995), where we explained we would "follow what the Supreme Court actually did—rather than what it failed to say" and thus applied *Casey's* undue burden test. We will again follow what the Supreme Court "actually did" and apply the test from *Stenberg* rather than the one from *Salerno*. We therefore join every circuit that

has addressed the question. *See Hicks*, 409 F.3d at 628; *Planned Parenthood of Idaho, Inc. v. Wasden*, 376 F.3d 908, 921 n. 10 (9th Cir. 2004); *Planned Parenthood of the Rocky Mountains Servs., Corp. v. Owens*, 287 F.3d 910, 919 (10th Cir. 2002). Thus, if the Act fails the *Stenberg* test, it must be held facially unconstitutional.

III

We begin our analysis with the Supreme Court's decision in *Stenberg*.[2] That case has engendered some disagreement as to the proper standard for evaluating the necessity of a health exception. The proper reading of *Stenberg* is a question of law and therefore is reviewed *de novo*. *See, e.g., Jeffries*, 405 F.3d at 684. The government argues *Stenberg* merely examined the specific factual record before the Court, and thus a health exception is only required when a banned procedure is actually "necessary, in appropriate medical

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[2] Amici have argued *Stenberg* does not apply for several reasons. To the extent their arguments suggest we disregard or overrule Supreme Court precedent, such a course of action is beyond our power. One amicus suggests *Stenberg* does not control because that case was decided under the Fourteenth Amendment, which, of course, does not apply to the federal government. While *Stenberg* was indeed a Fourteenth Amendment case, the Due Process Clause of the Fifth Amendment is textually identical to the Due Process Clause of the Fourteenth Amendment, and both proscribe virtually identical governmental conduct. *See, e.g., Malloy v. Hogan*, 378 U.S. 1, 8, 84 S. Ct. 1489, 12 L.Ed.2d 653 (1964). If anything, the Fifth Amendment's Due Process Clause has a broader reach in that it has been interpreted to apply the principles of the Fourteenth Amendment's Equal Protection Clause to the federal government. *See, e.g., Adarand Constructors, Inc. v. Pena*, 515 U.S. 200, 253 n. 8, 115 S. Ct. 2097, 132 L.Ed.2d 158 (1995); *Bolling v. Sharpe*, 347 U.S. 497, 74 S. Ct. 693, 98 L.Ed. 884 (1954).

judgment, for the preservation of the health of the mother." *Stenberg*, 530 U.S. at 930, 120 S. Ct. 2597 (internal quotations omitted). Plaintiffs, in contrast, contend that "where substantial medical authority supports the proposition that banning a particular abortion procedure could endanger women's health, *Casey* requires the statute to include a health exception when the procedure is "'necessary, in appropriate medical judgment, for the preservation of the life or health of the mother.'" *Stenberg*, 530 U.S. at 938, 120 S. Ct. 2597 (quoting *Casey*, 505 U.S. at 879, 112 S. Ct. 2791 (quoting *Roe v. Wade*, 410 U.S. 113, 165, 93 S. Ct. 705, 35 L.Ed.2d 147 (1973))).

The government argues that *Stenberg* embodies a lenient standard, and further urges that congressional factfinding must be afforded deference under *Turner Broadcasting v. FCC*, 512 U.S. 622, 114 S. Ct. 2445, 129 L.Ed.2d 497 (1994) (*Turner I*), and *Turner Broadcasting v. FCC*, 520 U.S. 180, 117 S. Ct. 1174, 137 L.Ed.2d 369 (1997) (*Turner II*). The government contends that because (in its opinion) Congress is afforded deference in factfinding as a general proposition, the district court's adoption of the "substantial medical authority" standard amounts to an implicit overruling of the *Turner* line of cases. According to the government, the "substantial medical authority" standard "must [therefore] be understood as[,] at most[,] a rule of decision in the *absence* of congressional findings, not as a basis for *disregarding* such findings." Br. of Appellant at 33. The government's argument, however, fundamentally misconstrues the threshold issue, for our task lies not in identifying who gets to decide, but rather in identifying the precise question that must be answered.

The other end of the spectrum on potential readings of *Stenberg* is exemplified by a recent decision in which the Fourth Circuit addressed *Stenberg's* health exception requirement standard in a case involving a state partial-birth abortion statute. *Hicks*, 409 F.3d at 625-26. The Fourth Circuit held that *Stenberg* "established the health exception requirement as a *per se* constitutional rule." *Id.* at 625. The court explained that "[t]his rule is based on substantial medical authority (from a broad array of sources) recognized by the Supreme Court, and this body of medical authority does not have to be reproduced in every subsequent challenge to a 'partial birth abortion' statute lacking a health exception," and therefore all statutes regulating partial-birth abortion must contain a health exception. *Id.* Several district courts have, at least implicitly, taken this position as well. *See, e.g., Reproductive Health Servs. of Planned Parenthood v. Nixon*, 325 F.Supp.2d 991, 994-95 (W.D. Mo. 2004); *WomanCare of Southfield, P.C. v. Granholm*, 143 F.Supp.2d 849, 855 (E. D. Mich. 2001); *Summit Med. Assocs. v. Siegelman*, 130 F.Supp.2d 1307, 1314 (M.D. Ala. 2001); *Daniel v. Underwood*, 102 F.Supp.2d 680, 684 (S.D. W. Va. 2000).

We agree with the Fourth Circuit that *Stenberg* establishes a per se constitutional rule in that the constitutional requirement of a health exception applies to all abortion statutes, without regard to precisely how the statute regulates abortion. *See Heed*, 390 F.3d at 59 (applying *Stenberg* to parental notification law). As the Ninth Circuit recently explained: "Any abortion regulation must contain adequate provision for a woman to terminate her pregnancy if it poses a threat to her life or her health." *Wasden*, 376 F.3d at 922. While *Stenberg's* health exception rule undoubtedly applies to

all abortion statutes, such a proposition does not explain how to evaluate *whether* a given restriction poses a constitutionally significant threat to the mother's health.

We believe the appropriate question is whether "substantial medical authority" supports the medical necessity of the banned procedure. *See Stenberg*, 530 U.S. at 938, 120 S. Ct. 2597; *id.* at 948, 120 S. Ct. 2597 (O'Connor, J., concurring); *see also Planned Parenthood Fed'n of Am. v. Ashcroft*, 320 F.Supp.2d 957, 1033 (N.D. Cal. 2004); *Nat'l Abortion Fed'n v. Ashcroft*, 330 F.Supp.2d 436, 487-90 (S.D.N.Y. 2004); *Carhart*, 331 F.Supp.2d at 1008. The *Stenberg* Court determined medical necessity (as that term was used in *Casey*) does not refer to "an absolute necessity or to absolute proof." *Stenberg*, 530 U.S. at 937, 120 S. Ct. 2597. Rather, "appropriate medical judgment" must "embody the judicial need to tolerate responsible differences of medical opinion." *Id.* Recognition of this principle was driven by the Court's concern that "the division of medical opinion about the matter at most means uncertainty, a factor that signals the presence of risk, not its absence." *Id.* Thus, when "substantial medical authority" supports the medical necessity of a procedure in some instances, a health exception is constitutionally required. In effect, we believe when a lack of consensus exists in the medical community, the Constitution requires legislatures to err on the side of protecting women's health by including a health exception.

In dissent, both Justice Kennedy and Justice Thomas criticized the *Stenberg* majority for imposing what they believed was a high burden on legislatures. Justice Kennedy commented that by disagreeing with Nebraska, the Court was effectively "[r]equiring Ne-

braska to defer to Dr. Carhart's judgment [, which was] no different from forbidding Nebraska from enacting a ban at all; for it is now Dr. Leroy Carhart who sets abortion policy . . . ." *Id.* at 965, 120 S. Ct. 2597 (Kennedy, J., dissenting). Justice Thomas characterized the majority opinion as requiring a health exception "because there is a 'division of opinion among some medical experts. . . .'" *Id.* at 1009, 120 S. Ct. 2597 (Thomas, J., dissenting) (quoting *id.* at 936-37, 120 S. Ct. 2597). "In other words, unless a State can conclusively establish that an abortion procedure is no safer than other procedures, the State cannot regulate that procedure without including a health exception." *Id.* (Thomas, J., dissenting).

Although the *Stenberg* majority did not believe the rule it announced gave individual doctors an absolute veto over legislatures, it emphasized that a health exception is required where "substantial medical authority" supports the medical necessity of a procedure. *Id.* at 938, 120 S. Ct. 2597. Such language would be rendered essentially meaningless if we accepted the government's reading of the case, a reading that would conform to neither the majority's reasoning nor to the dissenters' concerns. In sum, we conclude *Stenberg* requires the inclusion of a health exception whenever "substantial medical authority" supports the medical necessity of the prohibited procedure.

IV

A

Having identified the proper question, we now turn to determining how this question should be answered. The government argues the *Turner* line of cases requires courts to "'accord substantial deference to the predictive judgments of Congress,'" and the "sole obligation" of reviewing courts "is 'to assure that, in formulating its judgments, Congress has drawn reasonable inferences based on substantial evidence.'" *Turner II*, 520 U.S. at 195, 117 S. Ct. 1174 (quoting *Turner I*, 512 U.S. at 665-66, 114 S. Ct. 2445). Thus, under the government's formulation, we would be bound by Congress's determination that a "moral, medical, and ethical consensus exists that the practice of performing a partial-birth abortion" is never medically necessary, so long as this apparent factual determination is reasonable and supported by substantial evidence.

The government's argument is predicated on an erroneous assumption: that the "substantial medical authority" standard is a question of fact. While questions of law and questions of fact sometimes can be neatly separated, such questions are often intermingled and identified as so-called mixed questions of fact and law. *See, e.g., Ornelas v. United States*, 517 U.S. 690, 696, 116 S. Ct. 1657, 134 L.Ed.2d 911 (1996). Whether a partial-birth abortion is medically necessary in a given instance would be a question of fact; for in any given instance it would be either true or false that a partial-birth abortion is medically necessary. There may be conflicting expert opinions, but only one can actually be right in any given set of medical circumstances. In

contrast, whether the record in a particular lawsuit reflects the existence of "substantial medical authority" supporting the medical necessity of such procedures is a question that is different in kind; it asks only whether there is a certain quantum of evidence to support a particular answer, not which of the divergent opinions is ultimately correct. Reviewing the record to determine if the evidence presented suffices to support the conclusion reached by the lower court is typically treated as a matter of law. *See, e.g., Howard v. Massanari*, 255 F.3d 577, 580 (8th Cir. 2001) (applying *de novo* review of the Social Security Commissioner's conclusion despite prior district court review); *United States v. Thompson*, 285 F.3d 731, 733 (8th Cir. 2002) (reviewing the sufficiency of the evidence *de novo*). We must, of course, examine the evidence, but the legal question inherent in this inquiry is whether such record evidence constitutes "substantial medical authority" in a given case.

This case differs slightly from the typical case in which we review the evidence to determine if the record is sufficient to support the lower court's conclusion. Under the "substantial medical authority" standard, our review of the record is effectively limited to determining whether substantial evidence exists to support the medical necessity of partial-birth abortions without regard to the factual conclusions drawn from the record by the lower court (or, in this case, Congress). Thus, *Stenberg* created a standard in which the ultimate factual conclusion is irrelevant. Under this standard, we must examine the record to determine if "substantial medical authority" supports the medical necessity of the banned procedures. If it does, then a health exception is constitutionally required. If the

need for a health exception is not supported by "substantial medical authority," by contrast, then the state is free to impose the restriction without providing a health exception.

We believe an example from the Supreme Court's First Amendment jurisprudence is instructive here. In *New York Times v. Sullivan*, 376 U.S. 254, 84 S. Ct. 710, 11 L.Ed.2d 686 (1964), the Court held that the First Amendment "prohibits a public official from recovering damages for a defamatory falsehood relating to his official conduct unless he proves that the statement was made with 'actual malice'-that is, with knowledge that it was false or with reckless disregard of whether it was false or not." *Id.* at 279-80, 84 S. Ct. 710. To meet this burden, the public official must show actual malice by clear and convincing evidence. *See, e.g., Campbell v. Citizens for an Honest Gov't, Inc.*, 255 F.3d 560, 569 (8th Cir. 2001). In *Bose Corp. v. Consumers Union of the United States, Inc.*, 466 U.S. 485, 104 S. Ct. 1949, 80 L.Ed.2d 502 (1984), the Court faced the question of whether Federal Rule of Civil Procedure 52(a), which makes facts subject only to review for clear error, was the appropriate standard for reviewing a finding of actual malice. *Id.* at 487, 104 S. Ct. 1949. An individual's state of mind is a question of historical fact and would thus normally be reviewed only for clear error. *See, e.g., Hickey v. Reeder*, 12 F.3d 754, 756-57 (8th Cir. 1993) (holding that state of mind is a question of fact that is reviewed for clear error); *see also Bose*, 466 U.S. at 498 n. 15, 104 S. Ct. 1949 (noting that in *Herbert v. Lando*, 441 U.S. 153, 170, 99 S. Ct. 1635, 60 L.Ed.2d 115 (1979), the Court had referred "in passing" to actual malice as "ultimate fact"). The Court concluded, however, that the First Amendment requires

independent appellate review. The *Bose* Court explained that "[j]udges, as expositors of the Constitution, must independently decide whether the evidence in the record is sufficient to cross the constitutional threshold." *Id.* at 511, 104 S. Ct. 1949. The Court further stated that "independent inquiries of this kind are familiar under the settled principle that in cases in which there is a claim of denial of rights under the Federal Constitution, this Court is not bound by the conclusions of lower courts, but will reexamine the evidentiary basis on which those conclusions are founded." *Id.* at 510, 104 S. Ct. 1949 (internal quotations and alterations omitted). Thus, despite the fact that an individual's mental state is a question of pure historical fact, a determination of whether the record supports the finding of actual malice is a question of law. *See, e.g., Harte-Hanks Communications, Inc. v. Connaughton*, 491 U.S. 657, 685, 109 S. Ct. 2678, 105 L.Ed.2d 562 (1989); *Mercer v. City of Cedar Rapids*, 308 F.3d 840, 849 (8th Cir. 2002); *see also Bose*, 466 U.S. at 499, 104 S. Ct. 1949 (explaining the "*New York Times* rule emphasizes the need for an appellate court to make an independent examination of the entire record"). The same reasoning applies here. While judges under *Bose* must determine whether clear and convincing evidence of an individual's state of mind exists in an effort to protect that individual's First Amendment rights, here we must examine the record to determine whether "substantial medical authority" supports the need for a health exception so as to guard against the denial of another constitutional right.

As a result, the government's argument regarding *Turner* deference is irrelevant to the case at hand. Our review is based on the record and is guided, as de-

scribed below, by the legal conclusions reached by the Supreme Court in prior cases. Therefore, we need not address the government's assertions that federal courts must defer to congressional factfinding.

B

Courts engage in different types of factfinding, as the facts that they find can be either of an adjudicatory or legislative nature. *See Qualley v. Clo-Tex Int'l, Inc.*, 212 F.3d 1123, 1128 (8th Cir. 2000). Adjudicatory facts are those relevant only to the particular parties involved in the case. *United States v. Gould*, 536 F.2d 216, 219 (8th Cir. 1976). Classic examples are "'who did what, when, where, how and with what motive or intent.'" *Id.* (quoting 2 Kenneth Davis, *Administrative Law Treatise* § 15.03, at 353 (1958)). In contrast, legislative facts are those that have salience beyond the specific parties to the suit. *Qualley*, 212 F.3d at 1128. The medical necessity of particular abortion procedures clearly falls into this latter category, as such procedures are either sometimes medically necessary or they are not: the answer to this question does not vary from place to place or party to party.[3] While lower court conclusions drawn from the same body of evidence may vary from individual case to individual case, appellate courts can impose uniformity within their jurisdictions by according no deference to a lower court's record-based conclusions. Indeed, adopting a deferential posture in such circumstances could lead to the absurd result where two district courts within the same circuit (perhaps even within the same state) might examine the same body of evidence and reach different con-

[3] Of course, this may not be true of all abortion-related restrictions.

clusions as to the medical necessity of the partial-birth abortion procedures, but we would be forced to affirm both because the question is a close one. *See Hope Clinic v. Ryan*, 195 F.3d 857, 883-84 (7th Cir. 1999) (en banc) (Posner, J., dissenting), *vacated and remanded*, 530 U.S. 1271, 120 S. Ct. 2738, 147 L.Ed.2d 1001 (2000); *see also Lockhart v. McCree*, 476 U.S. 162, 169 n. 3, 106 S. Ct. 1758, 90 L.Ed.2d 137 (1986) (expressing doubt that "legislative facts" are reviewed deferentially because different courts can come to different conclusions from the same evidence). As Judge Easterbrook has cogently explained for the Seventh Circuit, the medical necessity of partial-birth abortion "must be assessed at the level of legislative fact, rather than adjudicative fact determined by more than 650 district judges. Only treating the matter as one of legislative fact produces the nationally uniform approach that *Stenberg* demands." *A Woman's Choice-E. Side Women's Clinic v. Newman*, 305 F.3d 684, 688 (7th Cir. 2002). The *Newman* court recognized that "[f]indings based on new evidence could produce a new understanding, and thus a different legal outcome. . . . But if the issue is one of legislative rather than adjudicative fact, it is unsound to say that, on records similar in nature, Wisconsin's law could be valid . . . and Indiana's law invalid, just because different district judges reached different conclusions about the inferences to be drawn from the same body of statistical work." *Id.*; *see also Hope Clinic*, 195 F.3d at 884 (en banc) (Posner, J., dissenting). Thus, although the Seventh Circuit prior to *Stenberg* had affirmed a trial court's decision upholding a partial-birth abortion ban based on the trial court's conclusion that partial-birth abortions are never medically necessary, the Supreme Court vacated the decision without regard to the specific facts found by

that particular trial court. *See Hope Clinic*, 530 U.S. at 1271, 120 S. Ct. 2738. On remand, the Seventh Circuit held the state bans unconstitutional (in agreement with the parties). *See Hope Clinic v. Ryan*, 249 F.3d 603, 604 (2001) (en banc) (decision on remand) ("[B]oth Illinois and Wisconsin have conceded that their partial-birth-abortion statutes are unconstitutional under the approach the Court adopted in *Stenberg*. We agree with this assessment of *Stenberg's* significance."). While we are hesitant to read too much into the Supreme Court's decision to vacate and remand *Hope Clinic*, its decision, along with the Seventh Circuit's comments regarding *Stenberg's* significance, is suggestive of a need to achieve constitutional uniformity through treatment of the issue as one of legislative fact.

In the specific context of a ban on partial-birth abortions, we join the reasoning of the Fourth Circuit and some of the district courts that have treated *Stenberg* as a per se constitutional rule. In *Stenberg*, the Court surveyed all of the available medical evidence (including the formal district court record, the district court records from other partial-birth abortion cases, amicus submissions, and some congressional records) and determined that "substantial medical authority" supported the need for a health exception. "[T]his body of medical authority does not have to be reproduced in every subsequent challenge to a 'partial birth abortion' statute lacking a health exception." *Hicks*, 409 F.3d at 625. Neither we, nor Congress, are free to disagree with the Supreme Court's determination because the Court's conclusions are final on matters of constitutional law. *See, e.g., Dickerson v. United States*, 530 U.S. 428, 437, 120 S. Ct. 2326, 147 L.Ed.2d 405 (2000) ("Congress may not legislatively supersede our de-

cisions interpreting and applying the Constitution."); *City of Boerne v. Flores*, 521 U.S. 507, 517-21, 117 S. Ct. 2157, 138 L.Ed.2d 624 (1997); *Stell v. Savannah-Chatham County Bd. of Educ.*, 333 F.2d 55, 61 (5th Cir. 1964) ("[N]o inferior federal court may refrain from acting as required by [*Brown v. Board of Education*] even if such a court should conclude that the Supreme Court erred as to its facts or as to the law."). And because the medical necessity of a health exception is a question of legislative fact, subsequent litigants need not relitigate questions the Supreme Court has already addressed. *See, e.g.*, *Hicks*, 409 F.3d at 625; *N.J. Citizen Action v. Edison Township*, 797 F.2d 1250, 1268 (3d Cir. 1986) (Weis, J., dissenting) ("The constitutional facts supporting a rule or doctrine must necessarily carry precedential weight so that government will be able to predict the validity of their regulatory actions. Thus, in large part the longevity of constitutional facts may be attributed to the doctrine of stare decisis and the important purposes that principle serves."); *Matthews v. Launius*, 134 F.Supp. 684, 686-87 (D. Ark. 1955) (recognizing that to succeed in a suit under *Brown*, a plaintiff need not reprove *Brown*'s factual predicates).

This is not to say, however, that because the Supreme Court concluded "substantial medical authority" supported the need for a health exception in 2000, legislatures are forever constitutionally barred from enacting partial-birth abortion bans. Rather, the "substantial medical authority" test allows for the possibility that the evidentiary support underlying the need for a health exception might be reevaluated under appropriate circumstances. Medical technology and knowledge is constantly advancing, and it remains theoretically possible that at some point (either through

an advance in knowledge or the development of new techniques, for example), the procedures prohibited by the Act will be rendered obsolete. Should that day ever come, legislatures might then be able to rely on this new evidence to prohibit partial-birth abortions without providing a health exception.

V

Stenberg identified what some refer to as "evidentiary circumstances" upon which the Court purportedly relied in determining whether "substantial medical authority" supported the need for a health exception. The *Stenberg* Court noted (1) the district court's conclusion that D & X significantly obviates health risks in certain circumstances and a highly plausible record-based explanation of why that might be so; (2) a division of opinion among medical experts regarding the procedure; and (3) an absence of controlled medical studies that address the safety and medical necessity of the banned procedures. 530 U.S. at 936-37, 120 S. Ct. 2597. In evaluating the government's case, we take *Stenberg* as the baseline and then determine if the government has proffered evidence sufficient to distinguish the present situation from *Stenberg's* "evidentiary circumstances." If the government marshals such evidence, we must then determine whether the evidence on the other side remains "substantial medical authority." Because we conclude the government has not adduced evidence distinguishing this case from *Stenberg,* we need not attemp to define the precise contours of "substantial medical authority."[4]

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[4] Though the government argues at length that substantial evidence supports Congress's conclusion, it at no point engages the

We know from *Stenberg* that "substantial medical authority" supports the conclusion that the banned procedures obviate health risks in certain situations. For example, there is "substantial medical authority" (in the form of expert testimony and amici submissions) that these procedures reduce the risk of uterine perforation and cervical laceration because they avoid significant instrumentation and the presence of sharp fetal bone fragments. *Stenberg*, 530 U.S. at 930-34, 120 S. Ct. 2597. There is also evidence the procedure takes less time and thus reduces blood loss and prolonged exposure to anesthesia. *Id.* The banned procedure may also eliminate the risk posed by retained fetal tissue and embolism of cerebral tissue into the woman's bloodstream. *Id.* Moreover, there is evidence regarding the health advantages the banned procedures provide when the woman has prior uterine scarring or when the fetus is nonviable due to hydrocephaly. *Id.*

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analysis undertaken by all three district courts to have addressed the constitutionality of the Act and one of the major points raised by the Appellees: that Congress's conclusion that a consensus has formed against the medical necessity of the procedures was unreasonable. The government has argued the district court adopted an erroneous reading of *Stenberg* by focusing on "substantial medical authority" and a lack of consensus against the procedures. Despite the fact that every federal court to have addressed the issue has rejected the government's position, the government never challenges the district court's conclusion that "substantial medical authority" supports the medical necessity of the banned procedures. By virtue of the government's failure to argue the issue in either its opening brief or in its reply, we could consider the issue waived. *See, e.g., Chay-Velasquez v. Ashcroft*, 367 F.3d 751, 756 (8th Cir. 2004) (failure to raise issue in opening brief constitutes waiver). However, we decline to do so and will address the issue nonetheless.

There is some evidence in the present record indicating each of the advantages discussed in *Stenberg* are incorrect and the banned procedures are never medically necessary. *See Carhart*, 331 F.Supp.2d at 822-51. There were, however, such assertions in *Stenberg* as well. *See Stenberg*, 530 U.S. at 933-34, 120 S. Ct. 2597; *id.* at 964-66, 120 S. Ct. 2597 (Kennedy, J., dissenting). Though the contrary evidence now comes from (some) different doctors, the substance of this evidence does not distinguish this case from *Stenberg* in any meaningful way.

To avoid *Stenberg*, the government cannot simply claim *Stenberg* was wrongly decided, for we are bound by the Supreme Court's conclusions. The facts in *Stenberg* were hotly contested, and simply asserting that the other side should have prevailed accomplishes nothing. Rather, to succeed, the government must demonstrate that relevant evidentiary circumstances (such as the presence of a newfound medical consensus or medical studies) have in fact changed over time.

If one thing is clear from the record in this case, it is that no consensus exists in the medical community. The record is rife with disagreement on this point, just as in *Stenberg*. In fact, one of the government's witnesses himself testified that no consensus exists in the medical community and further stated that there exists a "body of medical opinion," including the "position[s] taken by [the] American College of Obstetrics and Gynecologists" (ACOG) and "a responsible group of physicians," indicating that the procedures are indeed sometimes medically necessary. *Carhart*, 331 F.Supp.2d at 1012. The lack of consensus also extends to medical organizations. The American Medical Association believes the banned procedures to be medically un-

necessary while ACOG believes these procedures can be the most appropriate in certain situations. *Id.* at 843, 997. The Supreme Court relied on the ACOG view in particular in *Stenberg*, 530 U.S. at 935-36, 120 S. Ct. 2597. Moreover, the congressional findings quote "a prominent medical association's" conclusion that "there is no consensus among obstetricians about its use." Partial Birth Abortion Ban Act of 2003 § 2(14)(C), 117 Stat. at 1204 (internal quotations omitted). In short, no medical consensus has developed to support a different outcome.[5] *See, e.g., Carhart*, 331 F.Supp.2d at 1009 (concluding Congress's determination that a consensus against the banned procedures existed is unreasonable and not supported by substantial evidence); *Nat'l Abortion Fed'n*, 330 F.Supp.2d at 488-89 (same); *Planned Parenthood Fed'n of Am.*, 320 F.Supp.2d at 1025 (same).

While the existence of disagreement among medical experts has not changed, there has been one new study on the safety of the banned procedures. A recent study by Dr. Stephen Chasen addressed the comparative health effects of the D & X and D & E procedures.[6] Stephen T. Chasen et al., *Dilation and evacuation at 20 weeks; Comparison of operative techniques*, 190 Am. J. of Obstetrics and Gynecology 1180 (2004). The study

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[5] The government argues the district court erred for various reasons in discounting the testimony of experts. We need not address this issue because giving full value to the government's witnesses would in no way alter our conclusion that no consensus has been reached by the medical community.

[6] The variations in long-term health effects noted in the study were not statistically significant and we therefore will not address them. *See* Br. of Appellant at 43 (study cannot support "meaningful conclusions" about long-term complication rates due to small sample size).

found no significant difference in blood loss, procedure time, or short-term complication rates between the procedures. The government argues that these conclusions reinforce Congress's finding that the banned procedures are not safer than other methods (while also conceding that the conclusions militate against Congress's finding that the banned procedures have "serious" health risks). In drawing its conclusions, however, the government ignores the study's methodology. The choice of procedure in each case was not random, but was rather "based on cervical dilation and fetal position." *Id.* at 1181. Thus, the only real conclusion that can be drawn from this new study is that D & X is not inherently more dangerous than D & E in situations where the medical professional believes D & X to be the most appropriate procedure. No general conclusion regarding the medical necessity of the banned procedures in any given situation can be drawn from the study, which neither conclusively supports the position that the banned procedures are sometimes medically necessary, nor does it conclusively support the position that they are never medically necessary. The Chasen study therefore detracts in no way from the Supreme Court's prior conclusion, as there are still no medical studies addressing the medical necessity of the banned procedures.

We need not belabor the point. The record in this case and the record in *Stenberg* are similar in all significant respects. *See Nat'l Abortion Fed'n*, 330 F.Supp.2d at 492 (explaining that the government's arguments "all fail to meaningfully distinguish the evidentiary circumstances present here from those that *Stenberg* held required a health exception to a ban on partial-birth abortion"). There remains no consensus in the medical

community as to the safety and medical necessity of the banned procedures. There is a dearth of studies on the medical necessity of the banned procedures. In the absence of new evidence which would serve to distinguish this record from the record reviewed by the Supreme Court in *Stenberg*, we are bound by the Supreme Court's conclusion that "substantial medical authority" supports the medical necessity of a health exception. "As a court of law, [our responsibility] is neither to devise ways in which to circumvent the opinion of the Supreme Court nor to indulge delay in the full implementation of the Court's opinions. Rather, our responsibility is to faithfully follow its opinions, because that court is, by constitutional design, vested with the ultimate authority to interpret the Constitution." *Richmond Med. Ctr. for Women v. Gilmore*, 219 F.3d 376, 378 (4th Cir. 2000) (Luttig, J., concurring). Because the Act does not contain a health exception exception, it is unconstitutional. We therefore do not reach the district court's conclusion of the Act imposing an undue burden on a woman's right to have an abortion.

VI

For the reasons stated above, the judgment of the district court is affirmed.

APPENDIX B

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

No. 4:03CV3385

LEROY CARHART, M.D., WILLIAM G. FITZHUGH, M.D., WILLIAM H. KNORR, M.D., AND JILL L. VIBHAKAR, M.D., PLAINTIFFS

v.

JOHN ASHCROFT, IN HIS OFFICIAL CAPACITY AS ATTORNEY GENERAL OF THE UNITED STATES, DEFENDANT

Sept. 8, 2004

MEMORANDUM AND ORDER

KOPF, Chief Judge.

Again and again the uterus contracts as the cervix opens up. The tiny passageway that once allowed the entrance of a single file of sperm now must widen to about four inches to accommodate a baby's head.

Human births are far more dangerous than those of other mammals or even other primates. The human brain is three to four times bigger than an ape's brain. And the pelvis is narrower to allow us to walk upright. A human baby has to go through considerable contor-

tions to make it through the narrow opening. Sometimes, there simply is not enough room.[1]

Like giving birth to a child, when a woman ends her pregnancy during or after the second trimester, she confronts a serious problem. Her cervix will frequently be too small to allow the skull of the human fetus to pass through it. Although terminating a pregnancy in America is safer than childbirth, this "skull-is-too-large" difficulty makes the abortion of a human fetus, like the birth of a human baby, potentially very dangerous to both the life and health of the woman. Our elected representatives have decided that it is *never* necessary to use a specific surgical technique—"partial-birth abortion"—to deal with this concern during an abortion. On the contrary, they have banned the procedure.

After giving Congress the respectful consideration it is always due, I find and conclude that the ban is unreasonable and not supported by substantial evidence. In truth, "partial-birth abortions," which are medically known as "intact D & E" or "D & X" procedures, are sometimes necessary to preserve the health of a woman seeking an abortion. While the procedure is infrequently used as a relative matter, when it is needed, the health of women frequently hangs in the balance.

Four examples, out of many, illustrate this point:

* During the 17th week of gestation, before many physicians are comfortable inducing fetal death

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[1] *Life's Greatest Miracle* (PBS television broadcast, Nov. 20, 2001), *available at* http://www.pbs.org/wgbh/nova/transcript/2816miracle.html.

by injection prior to beginning a surgical abortion, one of Mr. Ashcroft's expert witnesses conceded that it would be consistent with the standard of care at the University of Michigan Medical School, where she practices, to crush the skull of the living fetus when the body was delivered intact outside the cervix and into the vaginal cavity if the skull was trapped by the cervix and the woman was hemorrhaging. (Tr. 1598-1602, Test. Dr. Shadigian.)

* Another of Mr. Ashcroft's expert witnesses, the head of obstetrics and gynecology at Yale, testified on direct examination, and confirmed again on cross-examination, that there are "compelling enough arguments as to [the banned technique's] safety, that I certainly would not want to prohibit its use in my institution." (Tr. 1706 & 1763, Test. Dr. Lockwood.)

* Another physician, Dr. Phillip D. Darney, the Chief of Obstetrics and Gynecology at San Francisco General Hospital, a major metropolitan hospital that performs 2,000 abortions a year, provided Congress with two very specific examples of abortions at 20 weeks and after (one case presenting with a bleeding placenta previa and clotting disorder and the other with a risk of massive hemorrhage) "in which the 'intact D & E' technique was critical to providing optimal care[,]" and was the "safest technique of pregnancy termination" in those situations. (Ct.'s Ex. 9, Letter to Sen. Feinstein from Dr. Darney, at 100-01.)

* Still another doctor, who had served on the committee of physicians designated by the American College of Obstetricians and Gynecologists (ACOG) to look into this issue and who holds certifications in biomedical ethics, obstetrics and gynecology, and gynecologic oncology, Dr. Joanna M. Cain, testified that in the case "of cancer of the placenta often diagnosed in the second trimester," where "the least amount of instrumentation possible of the uterine wall is desirable[,] . . . it is much safer for the woman to have an intact D & X to remove the molar pregnancy." (Pls.' Ex. 115, Dep. Dr. Cain, at 177.)

Therefore, I declare the "Partial-Birth Abortion Ban Act of 2003" unconstitutional because it does not allow, and instead prohibits, the use of the procedure when necessary to preserve the health of a woman. In addition, I decide that the ban fails as a result of other constitutional imperfections. As a result, I will also permanently enjoin enforcement of the ban.[2] Importantly, however, because the evidence was sparse regarding postviability, I do not decide whether the law is unconstitutional when the fetus is indisputably viable.

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[2] Should there be any doubt that these plaintiffs are in imminent danger of prosecution, on the day the President signed the ban, Mr. Ashcroft wrote the Director of the FBI, all United States Attorneys, and all FBI Special-Agents-in-Charge announcing that the "Department of Justice will enforce vigorously the criminal provisions of the Act." (Pls.' Ex. 40, at ENF00009.) He added: "All United States Attorneys are advised to contact the task force ([telephone number redacted]) at the earliest opportunity after learning of a possible violation of the Act." (*Id.*)

AN APOLOGY

In advance, I apologize for the length of this opinion. I am well aware that appellate judges have plenty to do and that long-winded opinions from district judges are seldom helpful. That admitted, this case is unique.

As might be expected, the two-week trial presented numerous live witnesses and hundreds of exhibits. That evidence includes a record developed by Congress over many years. Because the parties have also submitted the testimony and evidence presented in two other similar cases, this record is bloated by that additional information. Lastly, and most importantly, since I decide the constitutionality of an Act of Congress that explicitly found a prior decision of this court to be factually unsound, and that law addresses one of the most contentious issues confronting this nation, respect for our national legislature requires more than the usual attention to detail. Nonetheless, I pity the poor appellate judge who has to slog through this thing. I am truly sorry.

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I. FACTS

First, I give the background of this case. Second, I provide a summary of the congressional record regarding information provided by doctors, medical organizations, and statisticians. Third, I describe the medical evidence presented to me at trial.

A. BACKGROUND

I first give a brief statement of the case and describe the parties. Next I set forth the law banning the

procedure. After that, I reproduce the Congressional "Findings" which were published as a part of the law banning "partial-birth abortion."

1. STATEMENT OF THE CASE AND THE PARTIES

This is a challenge by four physicians to a law enacted by Congress in 2003 purporting to ban "partial-birth abortion." These physicians claim that the law is unconstitutional for four reasons. First, they claim that the law is invalid because it lacks an exception which would permit use of the banned procedure in order to preserve the health of women. Second, the doctors contend that the law bans other types of abortion procedures, not just "partial-birth abortion." Third, the physicians claim this criminal law is vague. Finally, the plaintiffs contend that the exception permitting a doctor to perform the banned procedure when necessary to preserve the life of the woman is too narrow.

Plaintiff LeRoy Carhart, M.D., practices medicine and surgery and performs abortions in Nebraska. While on active duty with the United States Air Force, Dr. Carhart received his Doctorate of Medicine from Hahnemann Medical College in 1973; completed his internship at Malcolm Grow USAF Hospital at Andrews Air Force Base, Maryland, in 1974; and completed his general surgery residency at Hahnemann Medical College and Hospital in Philadelphia, Pennsylvania, and Atlantic City Medical Center in Atlantic City, New Jersey, in 1978. Carhart is a retired lieutenant colonel in the United States Air Force who served as Chief of General Surgery, Chief of Emergency Medicine, and Chairman of the Department of

Surgery at Offutt Air Force Base in Nebraska from 1978 to 1985.

Dr. Carhart was an assistant professor from 1978 to 1986 in the surgery department of the Creighton University School of Medicine and an assistant professor in the University of Nebraska Medical Center Department of Surgery from 1982 to 1997. Since 1985, Dr. Carhart has operated the Bellevue Health and Emergency Center. He began performing abortions in an Omaha, Nebraska, clinic in 1988, and at his Bellevue clinic in 1992. He performs approximately 1,400 abortions each year in Nebraska. Dr. Carhart has never attempted to become certified by a medical specialty board. He is licensed to practice medicine in eight states. (Tr. 582-94, Test. Dr. Carhart; Ex. 111.)

Plaintiff William G. Fitzhugh, M.D., M.P.H., has practiced obstetrics and gynecology in Virginia and has served as faculty at the Medical College of Virginia since 1975. Dr. Fitzhugh received his medical degree in 1966 from the Medical College of Virginia in Richmond, Virginia, and completed a "straight medicine" internship at the Indiana University Medical Center in 1967. He then entered active duty with the United States Air Force, during which he finished his obstetrics and gynecology residency in 1972 at the Medical College of Virginia and received a master's degree in public health from the Johns Hopkins University School of Public Health in 1975. During his military tenure he was a flight surgeon for one year and Assistant Chief of the Obstetrics and Gynecology Department at the Malcolm Grow Medical Center, Andrews Air Force Base, for three years.

Dr. Fitzhugh's practice includes obstetrics and gynecology in Richmond, Virginia, and performing

abortions in three Virginia cities. He estimates that he performs 70 first-trimester abortions and 5 to 7 second-trimester abortions per week. He is a fellow of the American College of Obstetrics and Gynecology and a diplomate of the American Board of Obstetrics and Gynecology. (Tr. 203-12, Test. Dr. Fitzhugh; Ex. 92.)

Plaintiff William H. Knorr, M.D., is a board-certified obstetrician and gynecologist practicing in New York. He attended medical school from 1975 to 1979 at the Universidad Autonoma de Guadalajara in Mexico, after which he completed an additional year of clinical training at the New York Medical College in order to practice in the United States. Dr. Knorr's internship included rotations in surgery, neonatal intensive care, and obstetrics and gynecology at three different New York hospitals. Dr. Knorr is board-certified and is currently licensed to practice medicine in Alabama, South Carolina, and New York. He practices at three privately owned clinics in New York, and he owns an abortion clinic in Savannah, Georgia. Dr. Knorr estimates that he performed between 5,000 and 6,000 abortions in 2003, and 12 to 15 percent of those were second-trimester abortions. (Tr. 495-501, Test. Dr. Knorr; Ex. 98.)

Plaintiff Jill L. Vibhakar, M.D., received her medical degree from the University of Iowa College of Medicine in 1995 and was a resident in obstetrics and gynecology at the Beth Israel Medical Center in New York from 1995 to 1999. She was licensed to practice medicine in Iowa in 1999; has served as an assistant professor of clinical obstetrics and gynecology at the University of Iowa College of Medicine since 1999; and was certified by the American Board of Obstetrics and Gynecology in 2002. Dr. Vibhakar is a fellow of the American College

of Obstetricians and Gynecologists. (Tr. 306-08, Test. Dr. Vibhakar; Ex. 102.)

Fifty to seventy-five percent of Dr. Vibhakar's time is spent doing didactic and clinical teaching at the University of Iowa, with the remainder of her time being spent performing a full range of obstetrical and gynecological services, including treating women with high-risk pregnancies. Dr. Vibhakar sees private obstetrics and gynecology patients at the University of Iowa and has a variety of clinical assignments such as supervising labor and delivery, working in the ambulatory surgical center, performing outpatient procedures, and staffing the Veterans Administration Medical Center Gynecology Clinic. She also practices at the Emma Goldman Clinic, an independent, nonprofit women's clinic in Iowa City. Dr. Vibhakar estimates that she delivers between 50 and 75 babies per year; performs 1 to 3 abortions per month at the University of Iowa; and performed 264 second- trimester abortions at the Emma Goldman Clinic between 2001 and 2003. (Tr. 308-13, Test. Dr. Vibhakar; Ex. 102.)

Defendant John Ashcroft is sued in his official capacity as Attorney General of the United States of America, as are his employees, agents, and successors in office. Defendant Ashcroft is charged with enforcing the challenged provision of the Act. (Filing 29, Suppl. Compl.)

2. THE ACT

The Partial-Birth Abortion Ban Act of 2003, 18 U.S.C. § 1531, provides as follows:

> (a) Any physician who, in or affecting interstate or foreign commerce, knowingly performs a partial-

birth abortion and thereby kills a human fetus shall be fined under this title or imprisoned not more than 2 years, or both. This subsection does not apply to a partial-birth abortion that is necessary to save the life of a mother whose life is endangered by a physical disorder, physical illness, or physical injury, including a life-endangering physical condition caused by or arising from the pregnancy itself. This subsection takes effect 1 day after the enactment.

(b) As used in this section—

(1) the term "partial-birth abortion" means an abortion in which the person performing the abortion—

(A) deliberately and intentionally vaginally delivers a living fetus until, in the case of a head-first presentation, the entire fetal head is outside the body of the mother, or, in the case of breech presentation, any part of the fetal trunk past the navel is outside the body of the mother, for the purpose of performing an overt act that the person knows will kill the partially delivered living fetus; and

(B) performs the overt act, other than completion of delivery, that kills the partially delivered living fetus; and

(2) the term "physician" means a doctor of medicine or osteopathy legally authorized to practice medicine and surgery by the State in which the doctor performs such activity, or any other individual legally authorized by the State to perform abortions: *Provided, however,* That any individual who is not a physician or not otherwise legally authorized by the State to perform abortions, but who nevertheless directly performs a partial-birth

abortion, shall be subject to the provisions of this section.

(c)(1) The father, if married to the mother at the time she receives a partial-birth abortion procedure, and if the mother has not attained the age of 18 years at the time of the abortion, the maternal grandparents of the fetus, may in a civil action obtain appropriate relief, unless the pregnancy resulted from the plaintiff's criminal conduct or the plaintiff consented to the abortion.

(2) Such relief shall include—

(A) money damages for all injuries, psychological and physical, occasioned by the violation of this section; and

(B) statutory damages equal to three times the cost of the partial-birth abortion.

(d)(1) A defendant accused of an offense under this section may seek a hearing before the State Medical Board on whether the physician's conduct was necessary to save the life of the mother whose life was endangered by a physical disorder, physical illness, or physical injury, including a life-endangering physical condition caused by or arising from the pregnancy itself.

(2) The findings on that issue are admissible on that issue at the trial of the defendant. Upon a motion of the defendant, the court shall delay the beginning of the trial for not more than 30 days to permit such a hearing to take place.

(e) A woman upon whom a partial-birth abortion is performed may not be prosecuted under this section, for a conspiracy to violate this section, or for

an offense under section 2, 3, or 4 of this title based on a violation of this section.

3. THE CONGRESSIONAL FINDINGS SET FORTH IN THE LAW

The Congressional Findings accompanying the Act provide as follows:

The Congress finds and declares the following:

(1) A moral, medical, and ethical consensus exists that the practice of performing a partial-birth abortion—an abortion in which a physician deliberately and intentionally vaginally delivers a living, unborn child's body until either the entire baby's head is outside the body of the mother, or any part of the baby's trunk past the navel is outside the body of the mother and only the head remains inside the womb, for the purpose of performing an overt act (usually the puncturing of the back of the child's skull and removing the baby's brains) that the person knows will kill the partially delivered infant, performs this act, and then completes delivery of the dead infant—is a gruesome and inhumane procedure that is never medically necessary and should be prohibited.

(2) Rather than being an abortion procedure that is embraced by the medical community, particularly among physicians who routinely perform other abortion procedures, partial-birth abortion remains a disfavored procedure that is not only unnecessary to preserve the health of the mother, but in fact poses serious risks to the long-term health of women and in some circumstances, their lives. As a result, at least 27 States banned the procedure as did the United States Congress which voted to ban the

procedure during the 104th, 105th, and 106th Congresses.

(3) In *Stenberg* v. *Carhart*, 530 U.S. 914, 932, 120 S. Ct. 2597, 147 L. Ed. 2d 743 (2000), the United States Supreme Court opined "that significant medical authority supports the proposition that in some circumstances, [partial-birth abortion] would be the safest procedure" for pregnant women who wish to undergo an abortion. Thus, the Court struck down the State of Nebraska's ban on partial-birth abortion procedures, concluding that it placed an 'undue burden' on women seeking abortions because it failed to include an exception for partial-birth abortions deemed necessary to preserve the 'health' of the mother.

(4) In reaching this conclusion, the Court deferred to the Federal district court's factual findings that the partial-birth abortion procedure was statistically and medically as safe as, and in many circumstances safer than, alternative abortion procedures.

(5) However, substantial evidence presented at the Stenberg trial and overwhelming evidence presented and compiled at extensive congressional hearings, much of which was compiled after the district court hearing in Stenberg, and thus not included in the Stenberg trial record, demonstrates that a partial-birth abortion is never necessary to preserve the health of a woman, poses significant health risks to a woman upon whom the procedure is performed and is outside the standard of medical care.

(6) Despite the dearth of evidence in the Stenberg trial court record supporting the district court's

findings, the United States Court of Appeals for the Eighth Circuit and the Supreme Court refused to set aside the district court's factual findings because, under the applicable standard of appellate review, they were not "clearly erroneous". A finding of fact is clearly erroneous "when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed". *Anderson* v. *City of Bessemer City, North Carolina*, 470 U.S. 564, 573, 105 S. Ct. 1504, 84 L.Ed.2d 518 (1985). Under this standard, "if the district court's account of the evidence is plausible in light of the record viewed in its entirety, the court of appeals may not reverse it even though convinced that had it been sitting as the trier of fact, it would have weighed the evidence differently". *Id.* at 574, 105 S. Ct. 1504.

(7) Thus, in Stenberg, the United States Supreme Court was required to accept the very questionable findings issued by the district court judge-the effect of which was to render null and void the reasoned factual findings and policy determinations of the United States Congress and at least 27 State legislatures.

(8) However, under well-settled Supreme Court jurisprudence, the United States Congress is not bound to accept the same factual findings that the Supreme Court was bound to accept in Stenberg under the "clearly erroneous" standard. Rather, the United States Congress is entitled to reach its own factual findings—findings that the Supreme Court accords great deference—and to enact legislation based upon these findings so long as it seeks to

pursue a legitimate interest that is within the scope of the Constitution, and draws reasonable inferences based upon substantial evidence.

(9) In *Katzenbach* v. *Morgan*, 384 U.S. 641, 86 S. Ct. 1717, 16 L.Ed.2d 828 (1966), the Supreme Court articulated its highly deferential review of congressional factual findings when it addressed the constitutionality of section 4(e) of the Voting Rights Act of 1965 [42 U.S.C.A. § 1973b(e)]. Regarding Congress' factual determination that section 4(e) [42 U.S.C.A. § 1973b(e)] would assist the Puerto Rican community in "gaining nondiscriminatory treatment in public services," the Court stated that "[i]t was for Congress, as the branch that made this judgment, to assess and weigh the various conflicting considerations * * *. It is not for us to review the congressional resolution of these factors. It is enough that we be able to perceive a basis upon which the Congress might resolve the conflict as it did. There plainly was such a basis to support section 4(e) [42 U.S.C.A. § 1973b(e)] in the application in question in this case.". *Id.* at 653, 86 S. Ct. 1717.

(10) Katzenbach's highly deferential review of Congress' factual conclusions was relied upon by the United States District Court for the District of Columbia when it upheld the "bail-out" provisions of the Voting Rights Act of 1965 (42 U.S.C. § 1973c), stating that "congressional fact finding, to which we are inclined to pay great deference, strengthens the inference that, in those jurisdictions covered by the Act, state actions discriminatory in effect are discriminatory in purpose". *City of Rome, Georgia* v. *U.S.*, 472 F.Supp. 221 (D.D.C. 1979) aff'd *City of*

Rome v. *U.S.*, 446 U.S. 156, 100 S. Ct. 1548, 64 L.Ed.2d 119 (1980).

(11) The Court continued its practice of deferring to congressional factual findings in reviewing the constitutionality of the must-carry provisions of the Cable Television Consumer Protection and Competition Act of 1992 [Pub.L. 102-385, Oct. 5, 1992, 106 Stat. 1460; see Tables for complete classification]. See *Turner Broadcasting System, Inc.* v. *Federal Communications Commission*, 512 U.S. 622, 114 S.Ct. 2445, 129 L.Ed.2d 497 (1994) (*Turner I*) and *Turner Broadcasting System, Inc.* v. *Federal Communications Commission*, 520 U.S. 180, 117 S. Ct. 1174, 137 L.Ed.2d 369 (1997) (*Turner II*). At issue in the Turner cases was Congress' legislative finding that, absent mandatory carriage rules, the continued viability of local broadcast television would be "seriously jeopardized". The *Turner I* Court recognized that as an institution, "Congress is far better equipped than the judiciary to 'amass and evaluate the vast amounts of data' bearing upon an issue as complex and dynamic as that presented here", 512 U.S. at 665-66, 114 S. Ct. 2445. Although the Court recognized that "the deference afforded to legislative findings does 'not foreclose our independent judgment of the facts bearing on an issue of constitutional law,' "its "obligation to exercise independent judgment when First Amendment rights are implicated is not a license to reweigh the evidence de novo, or to replace Congress' factual predictions with our own. Rather, it is to assure that, in formulating its judgments, Congress has drawn reasonable inferences based on substantial evidence." *Id.* at 666, 114 S. Ct. 2445.

(12) Three years later in *Turner II*, the Court upheld the 'must-carry' provisions based upon Congress' findings, stating the Court's "sole obligation is 'to assure that, in formulating its judgments, Congress has drawn reasonable inferences based on substantial evidence.'" 520 U.S. at 195, 117 S. Ct. 1174. Citing its ruling in *Turner I*, the Court reiterated that "[w]e owe Congress' findings deference in part because the institution 'is far better equipped than the judiciary to 'amass and evaluate the vast amounts of data' bearing upon' legislative questions," *id.* at 195, 117 S. Ct. 1174, and added "that it 'owe[d] Congress' findings an additional measure of deference out of respect for its authority to exercise the legislative power." *Id.* at 196, 117 S. Ct. 1174.

(13) There exists substantial record evidence upon which Congress has reached its conclusion that a ban on partial-birth abortion is not required to contain a 'health' exception, because the facts indicate that a partial-birth abortion is never necessary to preserve the health of a woman, poses serious risks to a woman's health, and lies outside the standard of medical care. Congress was informed by extensive hearings held during the 104th, 105th, 107th, and 108th Congresses and passed a ban on partial-birth abortion in the 104th, 105th, and 106th Congresses. These findings reflect the very informed judgment of the Congress that a partial-birth abortion is never necessary to preserve the health of a woman, poses serious risks to a woman's health, and lies outside the standard of medical care, and should, therefore, be banned.

(14) Pursuant to the testimony received during extensive legislative hearings during the 104th,

105th, 107th, and 108th Congresses, Congress finds and declares that:

> (A) Partial-birth abortion poses serious risks to the health of a woman undergoing the procedure. Those risks include, among other things: An increase in a woman's risk of suffering from cervical incompetence, a result of cervical dilation making it difficult or impossible for a woman to successfully carry a subsequent pregnancy to term; an increased risk of uterine rupture, abruption, amniotic fluid embolus, and trauma to the uterus as a result of converting the child to a footling breech position, a procedure which, according to a leading obstetrics textbook, "there are very few, if any, indications for * * * other than for delivery of a second twin"; and a risk of lacerations and secondary hemorrhaging due to the doctor blindly forcing a sharp instrument into the base of the unborn child's skull while he or she is lodged in the birth canal, an act which could result in severe bleeding, brings with it the threat of shock, and could ultimately result in maternal death.
>
> (B) There is no credible medical evidence that partial-birth abortions are safe or are safer than other abortion procedures. No controlled studies of partial-birth abortions have been conducted nor have any comparative studies been conducted to demonstrate its safety and efficacy compared to other abortion methods. Furthermore, there have been no articles published in peer-reviewed

journals that establish that partial-birth abortions are superior in any way to established abortion procedures. Indeed, unlike other more commonly used abortion procedures, there are currently no medical schools that provide instruction on abortions that include the instruction in partial-birth abortions in their curriculum.

(C) A prominent medical association has concluded that partial-birth abortion is "not an accepted medical practice", that it has "never been subject to even a minimal amount of the normal medical practice development," that "the relative advantages and disadvantages of the procedure in specific circumstances remain unknown," and that "there is no consensus among obstetricians about its use". The association has further noted that partial-birth abortion is broadly disfavored by both medical experts and the public, is "ethically wrong," and "is never the only appropriate procedure".

(D) Neither the plaintiff in *Stenberg* v. *Carhart*, nor the experts who testified on his behalf, have identified a single circumstance during which a partial-birth abortion was necessary to preserve the health of a woman.

(E) The physician credited with developing the partial-birth abortion procedure has testified that he has never encountered a situation where a partial-birth abortion was medically necessary to achieve the desired outcome and, thus, is never medically necessary to preserve the health of a woman.

(F) A ban on the partial-birth abortion procedure will therefore advance the health interests of pregnant women seeking to terminate a pregnancy.

(G) In light of this overwhelming evidence, Congress and the States have a compelling interest in prohibiting partial-birth abortions. In addition to promoting maternal health, such a prohibition will draw a bright line that clearly distinguishes abortion and infanticide, that preserves the integrity of the medical profession, and promotes respect for human life.

(H) Based upon *Roe* v. *Wade*, 410 U.S. 113, 93 S. Ct. 705, 35 L.Ed.2d 147 (1973) and *Planned Parenthood* v. *Casey*, 505 U.S. 833, 112 S. Ct. 2791, 120 L.Ed.2d 674 (1992), a governmental interest in protecting the life of a child during the delivery process arises by virtue of the fact that during a partial-birth abortion, labor is induced and the birth process has begun. This distinction was recognized in Roe when the Court noted, without comment, that the Texas parturition statute, which prohibited one from killing a child "in a state of being born and before actual birth," was not under attack. This interest becomes compelling as the child emerges from the maternal body. A child that is completely born is a full, legal person entitled to constitutional protections afforded a "person" under the United States Constitution. Partial-birth abortions involve the killing of a child that is in the process, in fact mere inches away from, be-

coming a "person". Thus, the government has a heightened interest in protecting the life of the partially-born child.

(I) This, too, has not gone unnoticed in the medical community, where a prominent medical association has recognized that partial-birth abortions are "ethically different from other destructive abortion techniques because the fetus, normally twenty weeks or longer in gestation, is killed outside of the womb". According to this medical association, the "'partial birth' gives the fetus an autonomy which separates it from the right of the woman to choose treatments for her own body".

(J) Partial-birth abortion also confuses the medical, legal, and ethical duties of physicians to preserve and promote life, as the physician acts directly against the physical life of a child, whom he or she had just delivered, all but the head, out of the womb, in order to end that life. Partial- birth abortion thus appropriates the terminology and techniques used by obstetricians in the delivery of living children-obstetricians who preserve and protect the life of the mother and the child-and instead uses those techniques to end the life of the partially-born child.

(K) Thus, by aborting a child in the manner that purposefully seeks to kill the child after he or she has begun the process of birth, partial-birth abortion undermines the public's perception of the appropriate role of a physician during the delivery process, and per-

verts a process during which life is brought into the world, in order to destroy a partially-born child.

(L) The gruesome and inhumane nature of the partial-birth abortion procedure and its disturbing similarity to the killing of a newborn infant promotes a complete disregard for infant human life that can only be countered by a prohibition of the procedure.

(M) The vast majority of babies killed during partial-birth abortions are alive until the end of the procedure. It is a medical fact, however, that unborn infants at this stage can feel pain when subjected to painful stimuli and that their perception of this pain is even more intense than that of newborn infants and older children when subjected to the same stimuli. Thus, during a partial-birth abortion procedure, the child will fully experience the pain associated with piercing his or her skull and sucking out his or her brain.

(N) Implicitly approving such a brutal and inhumane procedure by choosing not to prohibit it will further coarsen society to the humanity of not only newborns, but all vulnerable and innocent human life, making it increasingly difficult to protect such life. Thus, Congress has a compelling interest in acting—indeed it must act—to prohibit this inhumane procedure.

(O) For these reasons, Congress finds that partial-birth abortion is never medically indicated to preserve the health of the mother; is

> in fact unrecognized as a valid abortion procedure by the mainstream medical community; poses additional health risks to the mother; blurs the line between abortion and infanticide in the killing of a partially-born child just inches from birth; and confuses the role of the physician in childbirth and should, therefore, be banned.
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> Pub.L. No. 108-105, § 2, Nov. 5, 2003, 117 Stat. 1201.

B. THE CONGRESSIONAL RECORD

A focused summary of the congressional record is appropriate. By way of an introduction, I state the intended purpose of this summary. Next, I describe the limits of this summary. Lastly, I describe the method I used to prepare the summary. After that, I provide the summary in a narrative and tabular form.

The primary aim of the summary is to catalogue the informed and serious medical opinions of physicians providing information to Congress regarding the need for and relative safety of the banned procedure for pregnant women. The overview is not intended to summarize other medical questions (like medical ethics) or the views of other interested persons or groups (like patients and nurses). Nor is the summary intended to address non-medical opinions (like legal arguments or the morality of abortion), even if the person who expressed such a non-medical view was a doctor.

To be both frank and critical, the otherwise lengthy record contains remarkably little substantive information from physicians on either side regarding the need for and safety of the banned procedure insofar as the health of pregnant women is concerned. In fact, the

record contains only a few statements of physicians who appeared to have extensive and current surgical experience performing abortions.

Still further, and very troubling, the number of physicians who actually appeared before Congress and testified[3] on any medical subject (as contrasted with doctors who submitted unsworn letters or statements) was small. In this regard, and excluding anesthesiologists and other physicians who testified primarily about fetal pain, during the several years Congress considered this matter, only seven doctors who dealt primarily with women's health issues actually appeared before Congress to give live testimony. Two opposed the ban, and five supported it.[4] As we shall see, while the two who opposed the ban had relevant abortion experience, the five who supported it had no such experience.

Interestingly, there is a fair amount of medical information from doctors about whether pain medications given to the pregnant woman during the banned procedure cause fetal death, whether fetuses are physiologically capable of receiving the stimuli that would cause a pain response in human beings, and whether

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[3] When I use the word "testified," I mean that a witness physically appeared before Congress and was recognized as a witness by the presiding officer, and the witness then spoke orally and was subject to questioning. That said, it does not appear that Congress administered an oath to any of the witnesses who "testified."

[4] The seven doctors who testified on women's health were: (1) Courtland Robinson, who opposed the ban; (2) Pamela Smith, who supported the ban; (3) Mary Campbell, who opposed the ban; (4) Nancy Romer, who supported the ban; (5) Curtis Cook, who supported the ban; (6) Kathi Aultman, who supported the ban; and (7) Mark Neerhof, who supported the ban.

human fetuses perceive pain in the same sense that human beings perceive pain. While these fetal-anesthesia questions are not directly pertinent to the case-dispositive legal questions, for the sake of completeness, I have nevertheless included a summary of them.

I should also make four things clear regarding this summary. That is:

* I did not consider certain portions of the record sufficiently helpful or trustworthy so as to warrant inclusion in the summary. For example, I attempted to avoid cumulative materials, and although I carefully reviewed them, I did not summarize statements or letters from physicians which are conclusory in nature or which state primarily legal or moral views. Nor have I summarized partial transcripts of judicial hearings or trials purporting to describe the views of a doctor unless it appeared that all of the doctor's testimony on the pertinent subject was included in the congressional record at that spot. In that same vein, and as contrasted with scientific papers or statements clearly subscribed to by a physician, in most cases, and with one exception regarding Dr. Hern, I have not summarized media or third-party accounts inserted into the record purporting to quote or describe the views of a physician. Furthermore, I have summarized only the statements of the two leading national medical associations —that is, the American Medical Association (AMA) and the American College of Obstetricians and Gynecologists (ACOG)—regarding substantive medical questions, but only to the

extent the statements reflected the considered medical opinion of such groups after an apparent professional inquiry. I did not summarize the policy views of these or other associations.[5] To be precise, and seeking to avoid a cumulative and redundant description of the record, I have not recounted the views of other national or state medical organizations (like the American Medical Women's Association or the California Medical Association). For the same reason, I have not recounted the views of affiliates of medical associations (like the state sections of ACOG). Similarly, and also because they were primarily formed to lobby for or against abortion legislation, I have not summarized "form" letters bearing multiple signatures from groups of physicians, such as "Physicians' Ad Hoc Coalition for the Truth" (which supported the ban) or "Physicians for Reproductive Choice and Health" (which opposed the ban).

* Redundant statements by the same physicians are generally not summarized more than once

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[5] For an example of why the policy views of the AMA on this subject are suspect, see Booz-Allen & Hamilton, *Management Audit of the American Medical Association Decision-Making Processes* (October 13, 1998), found in the 2003 hearing record. (Ct.'s Ex. 9, at 261-64 & 267.) This highly critical report was prepared for and at the direction of the AMA and studied the AMA's support of the Partial-Birth Abortion Ban Act of 1997. (Ct.'s Ex. 9, at 246.) In the end, the report concludes that "the combined effect of AMA policies was to allow the most critical, controversial, and high-visibility policy issues to be addressed using the least democratic, least researched, and least systematic decision-making process." (Ct.'s Ex. 9, at 267.)

even if the physician appeared at, or submitted information to, several different congressional hearings.

* Senator Frist,[6] Congressman Weldon, and Congressman Burgess supported the ban and spoke in favor of it in the floor debates. (Def.'s Ex. 517, at S3457-59 (statement of Sen. Frist); Def.'s Ex. 520, at H4918 (statement of Rep. Burgess); Def.'s Ex. 520, at H4938 (statement of Rep. Weldon); Def.'s Ex. 523, at S12947-48 (statement of Sen. Frist).) They were trained as physicians. However, because these men were acting as members of Congress and were properly pursuing their political duties, as contrasted with independent doctors giving their views to Congress on purely medical questions, I will not further summarize the views of these physician-legislators regarding the ban.

* Because of the imprecise method Congress uses to index and record information, it is difficult, at best, to locate in this record each pertinent utterance of a physician. For example, and as described more fully later, critical information submitted by one of the doctors who pioneered use of the banned procedure (Dr. McMahon) was not indexed in the pertinent congressional record as being from a physician. Therefore, and although I have spent a great deal of time reviewing the congressional record, I may have overlooked the views of a physician. If so, it was inadvertent.

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[6] Senator Frist was the Majority Leader in the Senate when the ban passed in 2003.

There are seven three-ring notebooks that comprise the bulk of the legislative record. At the beginning of the case, Mr. Ashcroft's able counsel provided me with these books and represented that they contained most of the congressional record pertinent to this case. Those books have been received in evidence as Court's Exhibits 4 through 10. Later, during the trial, the parties agreed that I should also consider certain floor debates that had not been included in the notebooks. Those debates appear in Defendant's Exhibits 502 through 523, which were also received in evidence. Following the trial, and during a period in which I allowed the parties to expand their record, they agreed to admission into evidence of Defendant's Exhibits 893 through 902, which added indexes and additional floor debates to the trial record. These exhibits (Ct.'s Exs. 4-10, Def.'s Ex. 502-523, and Def.'s Exs. 893-902) form the basis for the summary.

Regarding the congressional record which was received in evidence, Appendix I to this opinion gives the exhibit number, a corresponding citation in *Bluebook* form to the record which comprises the exhibit, and, when available, a Westlaw citation to the record which comprises the exhibit. Thus, the congressional record presented to me can more easily be located by the reader in a library or online by reference to Appendix I.

In most instances, the reference to a "page" in the summary pertains to the printed page number of the record (typically, but not always, found on the top of the page) that is summarized. Sometimes, and particularly when a printed page number is not available, a typewritten page number will be referenced. Once again, in order to avoid a cumulative presentation, not

every page in the record where a doctor may have expressed some view is referred to in this summary.

The "date" reference in the summary pertains to the date of the hearing, debate or the issuance of the report, and not necessarily the date of a doctor's statement. The "name" reference in the summary pertains to the physician or, infrequently, to a record keeper or to more generalized information.

The foregoing explained, I proceed next to the summary. First, I present a narrative summary. In Appendix II to this opinion, I also provide a tabular summary for quick reference.

Court's Exhibit 4; "1995 House Hearings"; Page: 15-21; Date: June 15, 1995; Name: Martin Haskell, M.D.

Dr. Haskell performed abortions in an outpatient clinic setting, and he claimed to be one of the first doctors to use a variant of the procedure that the legislation would ban. He did not testify, but a copy of his professional paper entitled "Dilation and Extraction for Late Second Trimester Abortion" presented to the National Abortion Federation Risk Management Seminar on September 13, 1992, was added to the record. There are handwritten notations and underlining on the article that are not from Dr. Haskell.

The paper contains a description of the "how, when, where, what, and why" of Dr. Haskell's procedure. In particular, Dr. Haskell described the procedure, giving the following details:

DESCRIPTION OF DILATION AND EXTRACTION METHOD

Dilation and extraction takes place over three days. In a nutshell, D & X can be described as follows:

Dilation

MORE DILATION

Real-time ultrasound visualization

Version (as needed)

Intact extraction

Fetal skull decompression

Removal

Clean-up

Recovery

Day 1—Dilation

The patient is evaluated with an ultrasound, hemoglobin and Rh. Hadlock scales are used to interpret all ultrasound measurements.

In the operating room, the cervix is prepped, anesthetized and dilated to 9-11 mm. Five, six or seven large Dilapan hydroscopic dilators are placed in the cervix. The patient goes home or to a motel overnight.

Day 2—More Dilation

The patient returns to the operating room where the previous day's Dilapan are removed. The cervix is scrubbed and anesthetized. Between 15 and 25 Dilapan are placed in the cervical canal. The patient returns home or to a motel overnight.

Day 3—The Operation

The patient returns to the operating room where the previous day's Dilapan are removed. The surgical assistant administers 10 IU Pitocin intramuscularly. The cervix is scrubbed, anesthetized and grasped with a tenaculum. The membranes are ruptured, if they are not already.

The surgical assistant places an ultrasound probe on the patient's abdomen and scans the fetus, located the lower extremities. This scan provides the surgeon information about the orientation of the fetus and approximate location of the lower extremities. The tranducer is then held in position over the lower extremities.

The surgeon introduces a large grasping forceps, such as a Bierer or Hern, through the vaginal and cervical canals into the corpus of the uterus. Based upon his knowledge of fetal orientation, the moves the tip of the instrument carefully towards the fetal lower extremities. When the instrument appears on the sonogram screen, the surgeon is able to open and close its jaws to firmly and reliably grasp a lower extremity. The surgeon then applies firm traction to the instrument causing a version of the fetus (if necessary) and pulls the extremity into the vagina.

By observing the movement of the lower extremity and version of the fetus on the ultrasound screen, the surgeon is assured that his instrument has not inappropriately grasped a maternal structure.

With a lower extremity in the vagina, the surgeon uses his fingers to deliver the opposite lower

extremity, then the torso, the shoulders and the upper extremities.

The skull lodges at the internal cervical os. Usually there is not enough dilation for it to pass through. The fetus is oriented dorsum or spine up.

At this point, the right-handed surgeon slides the fingers of the left hand along the back of the fetus and "hooks" the shoulders of the fetus with the index and ring fingers (palm down). Next he slides the tip of the middle finger along the spine towards the skull while applying traction to the shoulders and lower extremities. The middle finger lifts and pushes the anterior cervical lip out of the way.

While maintaining this tension, lifting the cervix and applying traction to the shoulders with the fingers of the left hand, the surgeon takes a pair of blunt curved Metzenbaum scissors in the right hand. He carefully advances the tip, curved down, along the spine and under his middle finger until he feels it contact the base of the skull under the tip of his middle finger.

Reassessing proper placement of the closed scissors tip and safe elevation of the cervix, the surgeon then forces the scissors into the base of the skull or into the foramen magnum. Having safely entered the skull, he spreads the scissors to enlarge the opening.

The surgeon removes the scissors and introduces a suction catheter into this hole and evacuates the skull contents. With the catheter still in place, he applies traction to the fetus, removing it completely from the patient.

> The surgeon finally removes the placenta with forceps and scrapes the uterine walls with a large Evans and a 14 mm suction curette. The procedure ends.
>
> *Recovery*
>
> Patients are observed a minimum of 2 hours following surgery. A pad check and vital signs are performed every 30 minutes. Patients with minimal bleeding after 30 minutes are encouraged to walk about the building or outside between checks.
>
> Intravenous fluids, pitocin and antibiotics are available for the exceptional times they are needed.

(*Id.* at 17-19.)

Note that Haskell only caused a "version" of the fetus "if necessary." (*Id.* at 18.) In other words, if the fetus presented "feet-first" in the uterus, then manipulation of the fetus to a "feet-first" presentation in the uterus was not needed. In that case, and using a single pass into the uterus, the fetal body was pulled "feet first" through the cervix until the skull, which is normally too large to pass, lodges against the interior portion of the cervical canal.

In the paper, Haskell stated that he had "performed over 700 of these procedures with a low rate of complications." (*Id.* at 15.) Haskell ended his paper by stating: "In conclusion, Dilation and Extraction is an alternative method for achieving late second trimester abortions to 26 weeks. It can be used in the third trimester. Among its advantages are that it is a quick, surgical outpatient method that can be performed on a scheduled basis under local anesthesia. Among its disadvantages are that it requires a high degree of sur-

gical skill, and may not be appropriate for a few patients." (*Id.* at 21.) The copied article (at this point in the record) does not contain Dr. Haskell's footnotes.

Court's Exhibit 4; "1995 House Hearings"; Page: 39-62; Date: June 15, 1995; Name: Pamela Smith, M.D.

Dr. Smith did not claim to do abortions. At the time she testified, she was the Director of Medical Education at Mt. Sinai Hospital. She was board-certified in obstetrics and gynecology. She testified as the president-elect of the American Association of Pro-Life Obstetricians and Gynecologists. She stated that the "partial-birth abortion" procedure is like an intentional breech delivery and that type of delivery is dangerous. She also stated that: "Although the defenders of this technique proclaim that it is safe, they have not substantiated these claims." (*Id.* at 43.)

Dr. Smith concluded:

> Today, partial-birth abortions are being heralded by some as safer alternatives to D & E. But "advances" in this type of technology do not solve the problem . . . they only compound it. In part because of its similarity to obstetrical techniques that are designed to save a baby's life and not to destroy it, this procedure produces a moral dilemma that is even more acute than that encountered in dismemberment techniques. The baby is literally inches from being declared a legal person by every state in the union. The urgency and seriousness of these matters therefore require appropriate legislative action.

(*Id.* at 44.)

Attached to Dr. Smith's presentation are letters from Watson Bowes, M.D., a fetal and maternal medical health professor (see below for his summary), stating that he believed the fetus is alive at the time the banned procedure is performed and attesting to the accuracy of certain drawings. (*Id.* at 46-47.) Also attached to Dr. Smith's presentation is a copy of Chapter 25 from *Williams Obstetrics* entitled "Techniques for Breech Delivery." (*Id.* at 48-62.) The textbook chapter does not pertain to abortion.

Court's Exhibit 4; "1995 House Hearings"; Page: 63-67; Date: June 15, 1995; Name: J. Courtland Robinson, M.D.

Dr. Robinson had been performing abortions, including second-trimester abortions, for about 40 years. A former medical missionary in Korea, Dr. Robinson was a full-time faculty member at Johns Hopkins University School of Medicine Department of Gynecology and Obstetrics and held a joint appointment with the Johns Hopkins School of Hygiene and Public Health.

Dr. Robinson acknowledged that during a standard D & E abortion, an intact fetus is sometimes removed, but "[i]n no case is pain induced to the fetus." (*Id.* at 66.) Dr. Robinson stated that the legislation would ban standard D & E abortions because doctors "would not undertake [such] a surgery if they were legally prohibited from completing it in the safest and most effective way, according to their professional judgment." (*Id.* at 66.) The implication of that statement is that sometimes it is necessary to deliver the fetus intact to perform the safest method of abortion. Dr. Robinson concluded that the law would interfere with

his obligation to select "the most appropriate surgical technique-using my expertise, developed over years of experience and training, to determine what method is safest . . . ." (*Id.* at 67.)

Court's Exhibit 4; "1995 House Hearings"; Page: 67-71; Date: June 15, 1995; Name: Robert J. White, M.D.

Dr. White did not perform abortions. He was an "academic neurosurgeon" and a professor of surgery at the Case Western Reserve University. (*Id.* at 69.) The doctor was of the opinion that a fetus subjected to the banned procedure at 20 weeks of gestation and beyond is sufficiently advanced in neurostructural organizational development to feel pain.

Later in the hearing, an article entitled "Neonatal Pain Management," authored by Constance S. Houck, M.D. (whose background is not included with the article), was added to the record. (*Id.* at 81.) As pertinent here, this journal article states that "[t]here is substantial evidence to show that development of the physiologic mechanisms and pathways for pain perception takes place during late fetal and neonatal life[,]" and that "[c]utaneous sensory perception . . . spreads to include all cutaneous and mucous surfaces by the 20th week." (*Id.*)

Court's Exhibit 4; "1995 House Hearings"; Page 104-107; Date: June 15, 1995; Name: Watson A. Bowes, Jr., M.D.

Dr. Bowes was described as "an internationally recognized authority on maternal and fetal medicine" and "a professor of both obstetrics/gynecology and pediatrics" at the University of North Carolina.[7] (*Id.* at

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[7] Dr. Bowes also testified at the trial in this case.

107.) There was no indication that Dr. Bowes performed abortions.

In a letter addressed to Chairman Canady, Dr. Bowes made the following points: (1) the language of the bill accurately described the procedure sought to be banned (specifically including those performed by Drs. Haskell and McMahon) (*id.* at 104-05); (2) although he had never witnessed the procedure, Dr. Bowes believed that the fetus is alive until the brain matter is removed (*id.* at 105); (3) although it is true that the analgesic given to the mother will reach the fetus and presumably provide some type of pain relief, the extent to which such relief is provided would be very difficult to document (*id.* at 106); (4) the drawings used by Congressman Canady and others to depict the banned procedure were accurate (*id.*); (5) banning the procedure would not prevent doctors from reducing fluid from the brain of the fetus in the case of an abnormality if the intent was to deliver a living infant (*id.* at 106-07); and (6) the viability of preterm infants varies widely, earlier statistics are outdated, and, as an example of more recent statistics, at 24 weeks of gestation, survival varies from a low of 10 percent to a high of 57 percent. (*Id.* at 107.)

Court's Exhibit 4; "1995 House Hearings"; Page: 108-21; Date: June 15, 1995; Name: James McMahon, M.D.

The description of a very important document in the congressional record is curiously inaccurate. It is entitled: "Appendix 3-Letter, With Enclosure, Dated June 8, 1995, to Keri D. Harrison,[8] Assistant Counsel, Subcommittee on the Constitution, From Eve Surgical

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[8] Harrison is listed in the record as Assistant Counsel to the Majority. (*Id.* at (II).)

Centers Medical Corp." (*Id.* at (III) & 108.) While the signature is somewhat difficult to read, and although it is written on letterhead bearing the name of Eve Surgical Centers Medical Corp., the handwritten letter was signed by "Jim McMahon." (*Id.* at 108.) Of course, Dr. McMahon was one of the pioneers of the banned procedure.

According to published sources, until his death in October of 1995, Dr. McMahon was the medical director of Eve Surgical Centers. Robert W. Lee, *The Partial Birth "Choice"* (April 15, 1996), *available at* http://www.thenewamerican.com/tna/1996/vo12no08/vo12no08_partialbirth.htm (last accessed June 17, 2004). After his death, the material, described as being from "Eve Surgical Centers," was explicitly attributed to Dr. McMahon when an opponent of the procedure testified. (Ct.'s Ex. 5, Test. Dr. Smith, at 82.) Some five years later, Congressman Canady specifically attributed this material to Dr. McMahon in a brief Mr. Canady and others submitted to the Supreme Court in *Stenberg* v. *Carhart*, 530 U.S. 914, 120 S.Ct. 2597, 147 L.Ed.2d 743 (2000). (Br. Amici Curiae Rep. Canady & Other Members of Congress Supp. Pet'rs, 2000 WL 228464 (Feb. 28, 2000).)[9] I, therefore, find and conclude that the material I next summarize was authored by Dr. McMahon, but inaccurately described by the House Judiciary Committee in its published records.

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[9] Contrary to the way the information is described and indexed in the congressional record, where no reference is made to Dr. McMahon as being the author, Mr. Canady's brief describes the information this way: "Appendix 3-Letter from Jim McMahon, M.D. to Keri Harrison (assistant counsel, Subcommittee on the Constitution) (June 8, 1995) (attaching charts of "Fetal Indications" for abortions he performed)." (Br. at 9.)

In part, Dr. McMahon's letter stated that the "additional material concerns technical matters regarding the surgery (intact D & E), fetal and maternal indications, blood loss, and major complications." (Ct.'s Ex. 4, at 108.[10]) The enclosure to the letter was a 13-page typewritten analysis (including charts, graphs, and statistics) of data derived from numerous "intact D & E" procedures performed by Dr. McMahon. (*Id.* at 109-21.)

Among other things, the data presented by Dr. McMahon showed that: (1) in his practice, as the length of gestation increased, the number of fetuses exhibiting significant fetal abnormalities also increased (*id.* at 109); (2) out of 2,000 "intact D & E" procedures, 5 women suffered major complications, but all survived (*id.* at 118-19); (3) blood loss increased with gestational age, but not substantially (*id.* at 120); and (4) a table was presented providing a general guide for surgeons as to the average amount of cerebral spinal fluid that should be removed from the fetus before intact delivery of the calvarium (skullcap) can be expected. (*Id.* at 121.[11])

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[10] In the letter, Dr. McMahon also inquired about protocol when testifying. (Ct.'s Ex. 4, at 108.) However, and perhaps because he died soon thereafter of cancer (Ct.'s Ex. 5, at 102), the record does not reflect that Dr. McMahon ever appeared before Congress.

[11] In the trial of this case, a paper presented on April 2, 1995, to the National Abortion Federation, prepared by Dr. McMahon and entitled, "Intact D & E, The First Decade," was received in evidence as Plaintiff's Exhibit 64. This paper explains in very great detail Dr. McMahon's experience in performing the procedure he called "intact D & E" from June of 1983 through February 1995. The paper indicated that he would sometimes convert the fetus to a footling breech and sometimes take the fetus as he found it depending upon whether there was a "Longitudinal lie, calvarium

Court's Exhibit 5; "1995 Senate Hearings"; Page: 5-12; Date: November 17, 1995; Name: Martin Haskell, M.D.

As previously indicated, Dr. Haskell performs abortions, and he was apparently one of the first doctors to use the procedure that the legislation bans. He did not testify at these Senate hearings, but, as before the House, a copy of his paper entitled "Dilation and Extraction for Late Second Trimester Abortion," presented to the National Abortion Federation Risk Management Seminar on September 13, 1992, was added to the record. Unlike the House version, this copy of the paper contains Dr. Haskell's footnotes. (*Id.* at 12.)

As noted, Haskell did not testify. His counsel advised the Senate that Dr. Haskell would not testify because he feared for his safety. (*Id.* at 15.) Among other things, counsel claimed that one of Dr. Haskell's clinics had been fire bombed.[12] (*Id.*)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 28-51; Date: November 17, 1995; Name: Martin Haskell, M.D.

This part of the record contains Dr. Haskell's testimony at the preliminary injunction hearing in *Women's Medical Professional Corp.* v. *Voinovich*, an Ohio federal case. It appears to contain the entire direct,

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presentation" (head first), "Longitudinal lie, breech presentation" (feet first), or "Transverse/oblique lie, various presentations" (at an angle or sideways). (Ex. 64, at CH0000501-02.) That paper will be discussed in more detail in a later portion of this opinion. It does not appear, however, that Congress gave this important paper much, if any, consideration.

[12] In preparing for the trial of this case, there was credible evidence presented to me under seal that showed one of the plaintiffs' witnesses had been subjected to extreme forms of violence because of his or her abortion practices.

cross, and redirect examination of Dr. Haskell as to his use of the banned procedure. It also includes questions put to the doctor by the presiding federal judge.

Among other things, Dr. Haskell testified that: (1) he used the banned procedure after the 20th week (*id.* at 41); (2) he had complications of 2 per 1,000 for the standard D & E during the relevant time (*id.*); (3) he had no complications in the 1,000 banned procedures that he performed during the relevant time (*id.* at 41-42); (4) he believed that "there's an enormous advantage to the woman" by using the banned procedure rather than a standard D & E (*id.* at 47); and (5) in response to questioning by the judge, Dr. Haskell explained why he thought the banned procedure was far better and, condensed, he gave these three reasons: (a) it minimizes trauma to the uterus; (b) it minimizes blood loss; and (c) it shortens surgical time. (*Id.* at 50.) Dr. Haskell, who had previously been board-certified but who was not board-certified at the time of his testimony,[13] stated that he learned the banned technique from Dr. McMahon, who Haskell regarded "as an expert amongst the peer of physicians that regularly perform abortions. [McMahon is] regarded as someone to whom the most difficult cases go." (*Id.* at 45.)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 99-101, 122-23, 153-54, 222-24; Date: November 17, 1995; Name: Mary Campbell, M.D.

Dr. Campbell was the Medical Director of Planned Parenthood of Metropolitan Washington. She was a fellow of the American College of Obstetrics and Gyn-

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[13] Haskell had been board-certified in family practice for seven years, but when his practice evolved into a speciality abortion practice, he did not renew his certification. (*Id.* at 31-32.)

ecology and held a master's degree in public health from Johns Hopkins University. I presume Dr. Campbell performed abortions based upon her directorship of an abortion clinic and (as discussed below) her observations of Dr. McMahon's abortion practice.

Dr. Campbell spent the summer of 1995 observing Dr. McMahon perform the banned procedure. When she was questioned by Senator Specter, Dr. Campbell stated that: (1) she had observed 10 of the banned procedures; (2) all of the fetuses involved in those procedures had serious defects (such as a single-chambered heart); and (3) none of the fetuses would have survived outside the womb. (*Id.* at 122-23.)

According to Dr. Campbell, the ban "outlaws the safest way of ending a third trimester pregnancy[,]" and the prohibited technique "is a safe procedure-safer than induction, far safer than hysterotomy." (*Id.* at 103.) From Campbell's point of view, the benefits of the banned procedure to the mother include decreased dilation of the cervix and decreased risk of cervical lacerations. (*Id.* at 102.)

Later inserted into the record, as a part of the questioning of Dr. Campbell, was a July 1985 professional paper entitled "Morbidity and Mortality from Second-Trimester Abortions," authored by David A. Grimes, M.D., and Kenneth F. Schulz, M.B.A., published in the Journal of Reproductive Medicine. (*Id.* at 125-34.) Based upon an analysis of statistics compiled from 1972 to 1981, the authors concluded that the "D & E [method] appears to be the safest method of second-trimester abortion available in the United States." (*Id.* at 125 (abstract).)

Dr. Campbell also clarified an earlier "fact sheet" prepared by her which stated that the fetus died in the womb during the banned procedure due to anesthesia. Dr. Campbell told Senator Abraham that she no longer believed "the fetus dies of an overdose of anesthesia given to the mother intravenously." (*Id.* at 153.) While she continued to believe that spontaneous fetal respiration or movement was not observed in the 2,000 or so times the banned procedure was performed by Dr. McMahon, and this led her to believe that the fetus was not in pain and was, perhaps, dead, Dr. Campbell admitted that she did know the precise timing or mechanism of death. (*Id.*)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 107-08, 225; Date: November 17, 1995; Name: Norig Ellison, M.D.

Dr. Ellison testified as the president of the American Society of Anesthesiologists. His association took no position on the appropriateness of any abortion procedure (including the banned procedure) and he did not appear to speak for or against the legislation. He did not claim to do abortions.

Dr. Ellison stated that he and his association disagreed with Dr. Haskell to the extent Haskell had said that anesthesia caused fetal demise or fetal brain death.

> Although it is certainly true that some general analgesic medications given to the mother will reach the fetus and perhaps provide some pain relief, it is equally true that pregnant women are routinely heavily sedated during the second or third trimester for the performance of a variety of necessary surgical procedures [other than abortion], with absolutely no adverse effect on the fetus . . . .

(*Id.* at 108.)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 144-46; Date: November 17, 1995; Name: Dru Elaine Carlson, M.D.

Dr. Carlson was the Director of Reproductive Genetics and a perinatologist and geneticist at Cedars-Sinai Medical Center in Los Angeles. She was also an assistant professor at the UCLA School of Medicine.

Dr. Carlson did not perform abortions, but advised women carrying abnormal fetuses in the second trimester about the nature and severity of the abnormality. If a woman wished to consider termination of her pregnancy because of a serious fetal abnormality, Dr. Carlson referred her patient to Dr. McMahon because of his "unusual expertise in the termination of late in gestation flawed pregnancies." (*Id.* at 144.) Among other things, Dr. Carlson stated:

> The usual type of termination of pregnancy is a traumatic stretching of the cervix that then increases a woman's chance for infertility in the future. The procedure that is up for "banning" allows very passive dilatation of the cervix and allows gentle manipulation to preserve the very much desired fertility of these distraught women.

(*Id.*)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 109-112, 156-57, 227-29; Date: November 17, 1995; Name: Nancy G. Romer, M.D.

Dr. Romer was a board-certified obstetrician and gynecologist and a fellow of the American College of Obstetrics and Gynecology. She was a clinical professor in the Department of Obstetrics and Gynecology at Wright State University and chairman of the depart-

ment of obstetrics and gynecology at a hospital in Dayton, Ohio, a city in which Dr. Haskell practices. Dr. Romer did not claim to do abortions. However, at her hospital there were physicians who did medically required second-trimester abortions and Dr. Romer testified that those physicians did not use the banned procedure. (*Id.* at 156-157.)

Dr. Romer stated that from her review of the literature, "[t]here is simply no data anywhere in the medical literature in regards to the safety and efficacy of this procedure." (*Id.* at 111.) "Since these procedures are currently being done in an outpatient clinic there is no ongoing peer review of either the procedure or the physician performing it." (*Id.*) She emphasized that "[i]f this procedure offered significant advantages over other termination procedures, and if there were no safe alternatives, there would be more physicians performing it. Instead there are only two clinics to my knowledge performing this procedure on a routine basis." (*Id.*)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 75-83, 214-21; Date: November 17, 1995; Name: Pamela E. Smith, M.D.

Dr. Pamela Smith, who did not claim to do abortions, testified before the House. I have earlier summarized her background and testimony. Her testimony before the Senate was similar. But, in two areas, she expanded upon her views that the procedure should be banned.[14]

Dr. Smith described in greater detail why she believed the banned procedure, mimicking (she thought) an intentional breech delivery, was medically inap-

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[14] She also submitted two letters to the Senate in December of 1995.

propriate. In particular, she was concerned that the procedure, since it requires substantial dilation of the cervix over several days, takes too long and she was also concerned that the procedure could puncture the cervix and the uterus, resulting in massive blood loss and possibly death. (*Id.* at 77-78.)

Apparently unaware that he submitted a detailed statement to the Senate opposing the ban and listing the potential benefits of the banned procedure, Dr. Smith referred to and relied upon part of a newspaper account that allegedly quoted Warren Hern, M.D. Dr. Smith said the following about Dr. Hern's views:

> It is also noteworthy that even leading authorities on late-term abortion methods have expressed the gravest reservations regarding this technique. Consider, for example, this excerpt from an article in the November 20 edition of *American Medical News*, the official newspaper of the American Medical Association.
>
> "I have very serious reservations about this procedure," said Colorado physician Warren Hern, M.D., the author of *Abortion Practice*, the nation's most widely used textbook on abortion standards and procedures. Dr. Hern specializes in late-term procedures * * * [O]f the procedure in question he says, "You really can't defend it. I'm not going to tell somebody else they should not do this procedure. But I'm not going to do it."
>
> Dr. Hern's concerns center on claims that the procedure in late-term pregnancy can be safest for the pregnant woman and that without this procedure women would have died. "I would dispute any state-

ments that this is the safest procedure to use," he said.

Turning the fetus to a breech position is "potentially dangerous," he added. "You have to be concerned about causing amniotic fluid embolism and placental abruption if you do that."

Dr. Hern said he could not imagine a circumstance in which this procedure would be safest. He did acknowledge that some doctors use skull-decompression techniques, but he added that in those cases fetal death has been induced and the fetus would not purposely be rotated into a breech position.

(*Id.* at 81.)

Dr. Smith also attacked two of the statistics provided by Dr. McMahon to the House earlier in 1995. She thought that McMahon's data tended to show that in 33% of 175 cases the women were already suffering from medical problems that were "contraindications" for use of the banned procedure as opposed to justifications for use of the procedure. (*Id.* at 82.) She also believed that in 22% of 175 cases the medical problems the women suffered from prior to the procedure (such as depression), and which allegedly persuaded Dr. McMahon to use the procedure, would have existed after the procedure-thus, the procedure was not needed to address the medical problem. (*Id.*)

Court's Exhibit 5; "1995 Senate Hearings"; Page: 1-17 of "Errata" (the last 10 pages[15] of the exhibit); Date: November 17, 1995; Name: Warren Martin Hern, M.D.

Dr. Hern performed outpatient abortions at his clinic in Colorado since 1975. He held both a master's and a Ph.D. degree in public health in addition to his medical degree. He served as Chief, Program Development and Evaluation Branch, Family Planning Division, Office of Health Affairs in the Office of Economic Opportunity, Executive Office of the President, Washington, D.C. He was an assistant clinical professor at the Department of Obstetrics and Gynecology at the University of Colorado Health Sciences Center. He was the author of a leading medical textbook on abortion and numerous other books and professional papers on abortion.

Another version of Dr. Hern's statement appears in Court's Exhibit 5 at 242-255. The "errata" note to the version I summarize gives the following explanation for the two statements:

> The following prepared statement of Warren M. Hern, M.D., M.P.H., Ph.D., replaces the printed version of his statement on pages 242 through 255 of the Senate Judiciary hearing entitled "Partial-Birth Abortion Ban Act of 1995", S. Hrg. 104-260, Serial

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[15] This document was not separately paginated by the Senate. Moreover, it was photocopied and placed into the record in a reduced, duplex form. In contrast, the document itself was paginated by Dr. Hern, and contains 17 pages. Since the congressional record contains no page numbers, citations in the text refer to Dr. Hern's typewritten page numbers which appear on the top of the document.

No. J-104-54, held on November 17, 1995, which was inadvertently inserted in the record.

(Ct.'s Ex. 5, "Errata" at first unnumbered page following printed cover sheet.)

In the beginning of his paper, Dr. Hern noted that he had been asked to testify in person by Senators Hank Brown and Ben Nighthorse Campbell. However, Dr. Hern stated (without further explanation) that "I was not permitted to testify in person . . . ." (*Id.* at 1.) Therefore, Dr. Hern requested that his written statement "be entered into the record as per the requests by Senators Brown and Campbell." (*Id.*)

At the hearing, Senator Brown confirmed "that Dr. Warren Hern is here[,]" and "[h]e had asked to testify . . . ." (Ct.'s Ex. 5, at 150.) Senator Hatch responded that "[t]hat is the first time I have heard that he wanted to testify." (*Id.*) Senator Brown asked Senator Hatch "if [Dr. Hern] has observations or reactions to our discussions, if I might be allowed to insert those in the record[,]" and Senator Hatch responded: "Sure; we would be happy to." (*Id.*)

Among other things, Dr. Hern made the following points in his paper: (1) the history of the banned procedure may date back as far as 1,950 years, and it is "not a new idea" (Ct.'s Ex. 5, "Errata," at 4-5); (2) "maneuvers described by the sponsors [of the law banning the procedure] are followed by attending physicians throughout the nation when the safety of the woman having the abortion is at issue" (*id.* at 6); (3) Dr. Hern used a variation of the banned procedure, but he first induced fetal death in the uterus by injection and "[i]n the case of a breech presentation of a dead fetus, the [banned method] is routinely followed" (*id.* at 6); (4) Dr.

Hern believed that the "possible advantages" to the banned procedure include "a reduction of the risk of perforation of the uterus[,]" and it "eliminates the risk of embolism of cerebral tissue into the woman's blood stream[,]" a complication which "can be almost immediately fatal" (*id.* at 7); (5) while fetuses have enough neurological development to permit reflexes, "[i]nterpretation of these reflexes as 'pain' is highly misleading" (*id.* at 8); (6) fewer than 500 abortions are performed after 26 weeks, "[t]he majority of those are now performed by [Dr. Hern or one of his] medical colleagues[,]" and "[t]hese abortions are almost always performed for the most tragic reasons of severe fetal anomaly, genetic disorder, or immediate risk to the woman's life" (*id.* at 8); (7) "a woman is ten or more times likely to die if she carries a pregnancy to term than if she has an abortion[,]" and, in particular, a late-term abortion is "safer in terms of mortality risk than carrying a pregnancy to term" (*id.* at 12); and (8) in 2 studies where the data was derived from his clinical practice and his variant of the procedure was followed, the complication rates for abortion were very low, that is, when the average length of pregnancy was 23 weeks, the major complication rate was less than 1% (1 out of 124) and when pregnancies ranged from 13 to 25 weeks, the major complication rate was 0.3% (3 out of 1,001). (*Id.* at 12-13.)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S17890; Date: December 4, 1995; Name: James R. Schreiber, M.D.

Dr. Schreiber was professor and head of obstetrics and gynecology at the Washington University Medical Center in St. Louis, Missouri. Dr. Schreiber did not

claim to perform abortions. He was responding to written questions from Senator Simon.

He opposed the ban. He thought the procedure might be necessary in two circumstances, that is: (1) "when the life of the woman is in danger and the most expeditious delivery of the fetus would be the safest method for her[,]" as the banned "method allows for that, since the fetus can be delivered through a partially dilated cervix" or (2) when, between 20 and 22 weeks, "a fetus that is doomed to die after delivery or has a series of severe malformations" is presented, since "this technique of abortion can be safest for the mother because it can be performed when the cervix is not fully dilated." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S17891; Date: December 4, 1995; Name: David W. Cromer, M.D.

Responding to written questions from Senator Simon, Dr. Cromer indicated that he was a member of the Department of Obstetrics and Gynecology at the Evanston Hospital in Illinois. He did not claim to perform abortions and he had never seen the banned procedure. Nevertheless, Dr. Cromer opposed the ban, and he stated that in "proper hands (i.e., a qualified physician) the procedure does have a place in the armamentarium of termination procedures." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S17891-92; Date: December 4, 1995; Name: Laurence I. Burd, M.D.

Responding to questions from Senator Simon, Dr. Burd indicated that he was an associate clinical professor of obstetrics and gynecology at the University of Illinois. He did not claim to perform abortions.

Dr. Burd opposed the ban. He stated that he referred patients to a surgeon who "is adept at surgically removing a fetus of late gestation (24 weeks or less) either intact or with only minimal distortion[,]" and "[t]his has great benefit for the patient because we are able to perform an autopsy on the fetus and confirm any of the suspected abnormalities for which the patient was referred." (*Id.* at S17891.)

With respect to the need for and safety of the banned procedure, "one can hypothesize that there is less trauma to the mother's cervix from further opening which would be required to deliver the fetal head without decompression." (*Id.*) He added that: "Greater trauma to the cervix has been implicated as a cause of an 'incompetent cervix' which results in repeated pregnancy loss." (*Id.*) As a result, Dr. Burd believed that evaluation of the procedure "must be left to the process of peer review[,]" because "[i]t is only by this method that those procedures which have the greatest benefit and carry the least risk to the patient can be identified." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S17892; Date: December 4, 1995; Name: Antonio Scommegna, M.D.

Dr. Scommegna was responding to written questions from Senator Simon. The doctor was on the staff of the University of Illinois at Chicago College of Medicine in its Department of Obstetrics and Gynecology. It is not clear whether the doctor performed abortions.

The doctor opposed the ban. He could "vividly recall" a situation when a woman presented in labor, suffering a high fever and infection, and with "her premature fetus partially expelled in the vagina through

an incompletely dilated cervix." (*Id.*) "Thus, a head decompression measure such as the one described in the partial-birth abortion bill was used." (*Id.*)

The doctor stated that "[i]f the proposed legislation was in effect," then his patient "would have had to be exposed to a Cesarean Section for a non-viable fetus." (*Id.*) Such an "invasive" procedure would have "increased significantly" the risk of "spreading infection, affecting her future fertility and perhaps compromising her life." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S17892; Date: December 4, 1995; Name: Donald M. Sherline, M.D.

Like several other doctors, Dr. Sherline was responding to written questions from Senator Simon. Dr. Sherline was on the staff of the Cook County Hospital in the Department of Obstetrics and Gynecology. It is not clear whether the doctor performed abortions.

He opposed the ban. He stated: "If we were to only judge the procedure on its medical merits and compared to the other methods of late second trimester abortion, it would be judged the safest method for the mother when carried out by an experienced operator." (*Id.*) But, he cautioned, because the procedure was not an "esthetically 'clean'" one, no "caring physician" would perform the procedure "except in the most demanding medically indicated situation." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S18192; Date: December 7, 1995; Name: Samuel Edwin, M.D.

Dr. Edwin was a practicing obstetrician and gynecologist from Michigan. It is unclear whether he performed abortions.

Dr. Edwin opposed the ban. He stated that "it will prevent me from providing the best possible care for my patients in emergency situations. The D & X procedure is the safest option for many women faced with medical emergencies during pregnancy." (*Id.*) He added that the procedure was used "only in extreme situations, such as when a woman's life is in danger or when a fetus has severe abnormalities that are incompatible with life." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S18197; Date: December 7, 1995; Name: L. Laurie Scott, M.D.

Dr. Scott was a maternal-fetal medicine specialist and she was on the faculty in the Department of Obstetrics and Gynecology at the University of Texas Southwest Medical Center. She did not claim to do abortions. She supported the ban. She stated "unequivocally that there is no maternal medical indication 'for late term abortions.'" (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S18197; Date: December 7, 1995; Name: Margaret Nordel, M.D.

Dr. Nordel was a practicing obstetrician and gynecologist from North Dakota. She did not claim to do abortions. She supported the ban and believed that the "'partial-birth abortion'" procedure is "unnecessary to

protect either the life or the health of women in this country." (*Id.*)

Defendant's Exhibit 901; "Fall of 1995 Senate Debate"; Page: S18197; Date: December 7, 1995; Name: Karen E. Shinn, D.O.

Dr. Shinn was a practicing obstetrician and gynecologist from New York. She did not claim to do abortions. She supported the ban and believed that the "partial birth abortion procedure is very dangerous and absolutely unnecessary to protect either the life or the health of women in America." (*Id.*)

Court's Exhibit 6; "1996 House Hearings"; Page: 17; Date: March 21, 1996; Name: Mary Campbell, M.D.

Dr. Campbell's earlier testimony has been summarized previously. Inserted into the record was an undated letter from Dr. Campbell to Senator Boxer. Among other things, Dr. Campbell wrote:

> In the case of late-term D & X abortion, the drug combination most frequently used has been intravenous Versed (10-40 mg, given in 1-2 mg increments) and Fentanyl (900-2500 µg, given in 100-150 µg increments) over a 1-3 hour period. The total dose and timing vary with the woman's weight and condition. These drugs have been documented to cross the placental circulation to the fetus. Though these total doses are high, the incremental administration of the drugs minimizes the probability of negative outcomes for the mother. In the fetus, these dosage levels may lead to fetal demise (death) in a fetus weakened by its own developmental anomalies. In other cases these drugs prevent the perception of pain by the fetus; they cause de-

pression of fetal respiration before the extraction procedure and preclude fetal respiration afterward.

(*Id.*)

Court's Exhibit 6; "1996 House Hearings"; Page: 130; Date: March 21, 1996; Name: William K. Rashbaum, M.D.

Dr. Rashbaum was a professor of obstetrics and gynecology at the Albert Einstein College of Medicine and the Cornell School of Medicine. He "started performing and teaching Dilation and Evacuation techniques in 1978." (*Id.*)

Dr. Rashbaum and his colleagues have completed over 19,000 abortion procedures. "We have done the D & X method that is under consideration [in the then-proposed legislation] routinely since 1979. This procedure is only performed in cases of later gestational age." (*Id.*)

"To ban the D & X would only be making a very safe procedure more dangerous." (*Id.*) As contrasted with the banned procedure, "Dilation and Evacuation requires surgical instruments that could result in rare but severe damage" to the pregnant woman. (*Id.*) "The D & X procedure does not require the use of these instruments." (*Id.*)

"Outlawing the D & X will result in higher maternal health risks and mortality. The result to the fetus is the same-unfortunate but merciful termination regardless of method." (*Id.*)

Court's Exhibit 6; "1996 House Hearings"; Page: 132; Date: March 21, 1996; Name: Herbert C. Jones, M.D.

Dr. Jones was a fellow of the American College of Obstetricians and Gynecologists. He operated a clinic for reproductive and sexual health and performed abortions.

Dr. Jones indicated that in 1956 he was trained to perform, and has since then used, "basically the technique which is being legislated against." (*Id.*) He concluded that: "This approach has been utilized for years and was advocated for the aftercoming head when undeliverable. The decompression of the cranium by needle or trocar[16] certainly is better than cesarean section or a hysterotomy." (*Id.*) He added that "[t]here have been two or three cases over the years that without knowledge of the ability to perform such a procedure would have left my patient in jeopardy[,]" particularly because "a change in type of delivery may have to be instantaneous." (*Id.*)

Court's Exhibit 6; "1996 House Hearings"; Page: 140-43; Date: March 21, 1996; Name: David J. Birnbach, M.D.

Like Dr. Ellison, whose 1995 testimony was summarized earlier,[17] Dr. Birnbach was an anesthesiologist. Dr. Birnbach was the Director of Obstetric Anesthesiology at St. Luke's-Roosevelt Hospital Center, a teaching hospital at Columbia University College of

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[16] A "trocar" is an instrument "for withdrawing fluid from a cavity" and it "consists of a metal tube (cannula) into which fits an obturator with a sharp three-cornered tip, which is withdrawn after the instrument has been pushed into the cavity." *Stedman's Medical Dictionary* 1878 (27th Test. Dr.).

[17] Dr. Ellison also gave similar testimony in 1996.

Physicians and Surgeons in New York City. He was president-elect of the Society for Obstetric Anesthesia and Perinatology when he testified. He did not claim to perform abortions.

Dr. Birnbach testified "to take issue with the previous testimony before committees of the Congress that suggests that anesthesia causes fetal demise." (*Id.* at 141.) He was particularly concerned that testimony regarding the banned procedure and the use of anesthesiology during that procedure might be misconstrued in the lay press such that pregnant women would fear that they could not have pain medication during normal delivery or surgery without killing the living fetus they wished to deliver. He was of the opinion that safe doses, and even massive doses, of pain medication would not cause fetal demise.

Commenting on Dr. McMahon's use of analgesics during the use of the banned procedure as allegedly described by persons other than Dr. McMahon (such as Dr. Campbell), Dr. Birnbach, who acknowledged that Dr. McMahon could not be questioned on the subject (due to his death), was of the opinion that the quantity of medication used by McMahon was excessive. Dr. Birnbach stated: "Although there is no evidence that this massive dose will cause fetal demise, there is clear evidence that this excessive dose could cause maternal death." (*Id.* at 142.[18])

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[18] There is no indication that Dr. Birnbach or any of the other anesthesiologists who questioned Dr. McMahon's use of pain medication and its impact upon the pregnant woman during performance of the banned procedure were aware that Dr. McMahon had provided the House with data which allegedly showed that Dr. McMahon's major complication rate was far less

Court's Exhibit 6; "1996 House Hearings"; Page: 143-46; Date: March 21, 1996; Name: David H. Chestnut, M.D.

Dr. Chestnut was Chairman of the Department of Anesthesiology at the University of Alabama at Birmingham. He did not claim to perform abortions. He gave testimony similar to that given by Dr. Birnbach. That is:

> In summary, these false claims regarding the effects of maternal anesthesia on the fetus may cause some pregnant women to delay necessary and perhaps even life-saving surgery during pregnancy. Further, these false claims may prompt other women to deny themselves adequate pain relief during labor and vaginal or cesarean delivery. In almost all cases, anesthesia does not kill the fetus unless the mother is killed or seriously injured first. Clinical administration of local anesthetic drugs has negligible effect on the fetus. Administration of either small or large doses of Versed™ and fentanyl does not result in fetal death or fetal neurologic injury. I am skeptical that any physician in the United States would knowingly administer 10 to 40 mg of Versed™ and 900 to 2500 μg of fentanyl for an abortion procedure. Finally, it is unlikely that these doses consistently abolish all fetal pain.

(*Id.* at 146.)

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than 1% (5 out of 2,000) and which also allegedly showed that the few patients who suffered major complications all survived.

Court's Exhibit 6; "1996 House Hearings"; Page: 146-50; Date: March 21, 1996; Name: Jean A. Wright, M.D.

Dr. Wright was an associate professor of pediatrics and anesthesia at Emory School of Medicine. She was board-certified in pediatrics, anesthesia, and critical care medicine. She did not claim to do abortions.

Dr. Wright concluded that:

> The scientific literature reviewed above and my clinical experience in the delivery of general anesthesia, systemic analgesia, conscious sedation, local and regional anesthesia to a wide variety of patients lead me to believe that:
>
> 1. The anatomical and functional processes responsible for the perception of pain have developed in human fetuses that may be considered for "partial birth abortions." (At this stage of neurologic development, human fetuses respond to the pain caused by needle puncture in utero in a similar manner as older children or adults, within the limits of their behavioral repertoire).
>
> 2. It is likely that the *threshold for such pain is lower* than that of older preterm newborns, full-term newborns, and older age groups. Thus, the pain experienced during "partial birth abortions" by the human fetus would have a *much greater intensity than any similar procedures performed in older age groups.*
>
> 3. Current methods for providing maternal anesthesia during "partial birth abortions" are unlikely to prevent the experience of pain and stress in the human fetuses before their death occurs after partial delivery.

(*Id.* at 150 (emphasis in original).)

Attached to Dr. Wright's statement were numerous articles from medical journals. These articles dealt with pain and anesthesia from the viewpoint of newborn children and fetuses. (*Id.* at 151-282.) Perhaps the most informative of these articles came from a leading British medical journal. It concluded:

> Since the mechanisms involved in pain perception are not fully understood, it is not possible to conclude that the fetus experiences pain [but] . . . [o]ur study shows that, as with neonates, the fetus mounts a similar hormonal response to that which would be mounted by older children and adults to stimuli which they would find painful. . . .
>
> Just as physicians now provide neonates with adequate analgesia, our findings suggest that those dealing with the fetus should consider making similar modifications to their practice. This applies not just to diagnostic and therapeutic procedures on the fetus, but possibly also to termination of pregnancy, especially by surgical techniques involving dismemberment.

(*Id.* at 282 (Xenophon Giannakoulopoulos, et al., *Fetal plasma cortisol and B-endorphin response to intrauterine needling*, Lancet 77 & 80 (July 9, 1994).))

Court's Exhibit 6; "1996 House Hearings"; Page: 289-90; Date: March 21, 1996; Name: Mitchell Creinin, M.D.

Dr. Creinin was an assistant professor and Director of Family Planning Research at the Magee-Women's Hospital. The hospital was a part of the University

Health Center of Pittsburgh. From this record, it was not clear whether Dr. Creinin performed abortions.

Dr. Creinin was of the opinion that fetuses do not suffer pain. That is, because pain "is only experienced at a conscious level" and a "fetus in the uterus has no level of consciousness," fetuses suffer no pain. (*Id.* at 289.) Furthermore, Dr. Creinin was of the opinion that researchers who propose that fetuses suffer pain are mistaking an autonomic reflex that does not involve the conscious brain for a perception of pain that does involve the conscious brain.

Defendant's Exhibit 901; "1996 Senate Debate"; Page: S11387; Date: September 26, 1996; Name: Albert W. Corcoran, M.D.

Dr. Corcoran was a practicing obstetrician and gynecologist. He did not claim to perform abortions, and he supported the ban. He thought the banned procedure was dangerous because "forceful dilation . . . creates a site for infection and excessive bleeding[,]" particularly because the "placenta is not ready for delivery [so] it may [be] deemed necessary to manually deliver it[,]" which "may cause even more bleeding." (*Id.*)

Court's Exhibit 7; "1997 Joint Hearings"; Page: 9-12; Date: March 11, 1997; Name: Edward J. Sondik, Ph.D.

Dr. Sondik was senior advisor to the Secretary of Health and Human Services on health statistics. He also served as the Director of the National Center for Health Statistics, which is a part of the Centers for Disease Control and Prevention.

He stated that "[b]ecause the term 'partial-birth abortions' is not a medical term," doctors do not use it

when submitting data on abortions. (*Id.* at 9.) The banned procedure (variously described by doctors as a D & X or intact D & E procedure) "is one of several abortion methods included under the general category of curettage." (*Id.*) Attached to Dr. Sondik's statement were two tables, one showing the number of procedures by weeks of gestation and the other showing an estimate of the numbers of abortion by more detailed gestational distribution. (*Id.* at 9 & 11-12.) Dr. Sondik was "unaware of credible data to address use of [the banned] procedure." (*Id.* at 10.)

Court's Exhibit 7; "1997 Joint Hearings"; Page: 120-124, 132-35; Date: March 11, 1997; Name: Curtis Cook, M.D.

Dr. Cook did not claim to do abortions. He was a board-certified obstetrician and gynecologist and a maternal-fetal medicine specialist. He was an assistant clinical professor at the Michigan State University College of Human Medicine. He was the founding member of Physicians' Ad Hoc Coalition for Truth About Partial Birth Abortion (PHACT), a group of doctors who intended to "educate the population on this single issue." (*Id.* at 123.[19])

Dr. Cook stated: (1) partial-birth abortion is mostly performed in the fifth and sixth months of pregnancy (*id.*); (2) the procedure takes days due to the need for cervical dilation and thus it takes longer than an induction abortion which takes about 12 hours (*id.* at 123-24); (3) internal rotation of the fetus to the breech position during the banned procedure places the woman at greater risk for bleeding, infection, and weakening of

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[19] Dr. Cook provided Congress with similar testimony in 2003. Dr. Cook also testified at the trial in this case.

the cervix (*id.* at 123); (4) there is no record of the banned procedure in the medical literature (*id.*)[20]; (5) there is no advantage to the banned procedure even in situations involving fetal abnormalities and there are other procedures (like induction) that would suffice (*id.* at 124); and (6) he believed that even five- to six-month-old fetuses suffer pain, and he had witnessed fetuses of this age withdraw from needles and the like while the doctor was performing life-saving measures on the fetuses while in the uterus. (*Id.*)

Court's Exhibit 7; "1997 Joint Hearings"; Page: 165-67; Date: March 11, 1997; Name: Sheila Lynn Kuzmic, M.D.

Dr. Kuzmic was a board-certified pediatrician. She was on maternity leave from private practice at the time she provided her statement.

Dr. Kuzmic was of the opinion that fetuses suffer pain from as "young as 24 weeks gestational age and up." (*Id.* at 166.) In particular, she relied upon her

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[20] This assertion is incorrect. As Dr. Hern told Congress, the procedure or some variant of it has been around for nearly 2,000 years. Procedures similar to the banned procedure were discussed in American medical literature at least as early as 1866. (Pls.' Ex. 51, at 27 (Hugh L. Hodge, M.D., *The Principles and Practice of Obstetrics* 268 (1866) (discussing "Embryotomy," "Craniotomy" and "Cephalotomy"; calling these types of procedures "probably the most ancient of obstetric operations"; referring to a "Craniotomy or Cephalotomy," and stating: "Delivery by this operation implies perforation of the head, diminution of its size, and then its deliverance.").)) A procedure similar to the banned procedure has also been mentioned in popular American fiction for at least 50 years. *See* Henry Morton Robinson, *The Cardinal* 77-78 (Simon & Schuster 1949) (" 'If the birth is started, and the infant's skull gets wedged in the pelvis [sic][,]' " "the '[r]outine practice among non-Catholic doctors calls for a craniotomy-that is, crushing of the infant's skull.' ")

clinical experience in the resuscitation of infants (both premature and full-term) and the previously described journal article entitled "Fetal plasma cortisol and *B*-endorphin response to intrauterine needling." (*Id.* at 166-67.)

Defendant's Exhibit 899; "May of 1997 Senate Debate"; Page: S4521; Date: May 15, 1997; David Grimes, M.D.

From other portions of the congressional record, it appears that Dr. Grimes was board-certified in obstetrics and gynecology, had been Chief of the Department of Obstetrics, Gynecology and Reproductive Sciences at the San Francisco General Hospital, and had served as Chief of the Abortion Surveillance Branch of the Centers for Disease Control. (Def.'s Ex. 902, "November of 1995 House Debate," at H11610; Def.'s Ex. 901, "November of 1995 Senate Debate," at S16776.) He was a prolific author on the subject of abortion. (See Pls.' Ex. 44) (David A. Grimes, et al., *Mifepriston and mioprostotol versus dilation and evacuation for midtrimester abortion: a pilot randomized controlled trial,* 111 Br. J. Obstet. Gynaecol. 148 (2004) (in a pilot study intended to determine the feasibility of a randomized controlled trial comparing certain medically induced abortions (labor) as compared to a particular type of surgical abortions (D & E), most women, when provided with "informed consent" information, choose the surgical abortion (D & E) rather than "randomization," thus making a trial impossible).)

Dr. Grimes gave the Senate an example of when and why he used the banned procedure to save a patient's life. The woman was seriously ill from preeclampsia, a disease the doctor described as "toxemia of pregnancy."

(Def.'s Ex. 899, at S4521.) This illness manifested itself as "a dangerous and extreme form" known as "HELLP syndrome" involving liver failure and an abnormal blood-clotting ability. (*Id.*) The gestational age of the fetus was 24 weeks.

Over several days, attempts were made, unsuccessfully, to induce labor. The woman's medical condition continued to get worse. Out of "desperation," the attending physician then called Dr. Grimes to assist. (*Id.*) Grimes used the banned procedure, completing the procedure rapidly and with little blood loss. Dr. Grimes told the Senate that "[i]n this instance, an intact D & E was the fastest and safest option available to me and to the patient." (*Id.*)

Defendant's Exhibit 899; "May of 1997 Senate Debate"; Page: S4565; Date: May 15, 1997; C. Everett Koop, M.D.

Former Surgeon General Dr. Koop wrote that it was "never necessary" to perform an abortion on a viable fetus to preserve the health of the mother. (*Id.*) Although he could not think of an example, "if it were deemed beneficial for the mother to be without the fetus, it could be delivered by induction or C-section." (*Id.*)

Court's Exhibit 8; "2002 House Hearings"; Page: 6-14, 32-33; Date: July 9, 2002; Name: Kathi Aultman, M.D.

Dr. Aultman was a board-certified gynecologist and a fellow of the American College of Obstetricians and Gynecologists. She was in private practice. She was on the Ethics Commission of the Christian Medical and Dental Association and a member of PHACT, the group founded by Dr. Cook to ban the procedure. Although she had not performed abortions since 1982, Dr.

Aultman had previous experience performing D & E abortions when she worked for a local Planned Parenthood clinic as a medical director in the early 1980s.

Among others, Dr. Aultman rendered the following opinion about the differences between a standard D & E and the banned procedure:

> Both the American Medical Association and the American College of Obstetricians and Gynecologists clearly distinguish D & X and D & E. The difference between D & E, or dilation and evacuation, and D & X, dilation and extraction, is that, in the D & E, the cervix is dilated just enough to allow passage of the forceps and the removal of fetal parts. By grasping an extremity and pulling, the part can be detached because the rest of the body can't pass through the cervix. Once the smaller parts have been removed, the physician can crush the thorax and head and remove them.
>
> In the D & E, the fetus dies in the uterus as it is dismembered or crushed. In D & X, the cervix is dilated to a much larger degree so that everything but the head can pass through. The head is then decompressed and the fetus is delivered.
>
> In D & X, the fetus is still alive when everything but the head is delivered into the vagina, but then dies when the head is crushed or the brains are suctioned.
>
> D & E can be performed from about 13 to 22 weeks and, rarely, until 24 weeks' gestation, early to mid second trimester. Past that point, the tissues become too tough to break apart easily. D &

> X is generally performed from about 20 to 22 weeks' gestation and beyond and has been done as late as 40 weeks, full term.

(*Id.* at 7.)

Dr. Aultman also believed that the banned procedure was unnecessary to preserve a pregnant woman's health. She said:

> The ban on partial-birth abortion would not endanger a woman's health because it isn't medically necessary and there are standard alternative methods available at every gestational age. There's also an exception if her life is truly threatened.
>
> Obstetricians regularly handle medical complications of pregnancy that may threaten a woman's health or life without having to resort to partial-birth abortion. In an emergency situation, when immediate delivery is necessary, D & X would not be used because it would take too long. In its report on late-term pregnancy termination techniques, the AMA stated: Except in extraordinary circumstances, maternal health factors which demand termination of the pregnancy can be accommodated without sacrifice of the fetus, and the near certainty of the independent viability of the fetus argues for ending the pregnancy by appropriate delivery.
>
> They also stated that according to the scientific literature, there does not appear to be any identified situation in which intact D & X is the only appropriate procedure to induce abortion and ethical concerns have been raised by intact D & X.

(*Id.* at 8.)

Additionally, she thought there were health risks with using the banned procedure insofar as the pregnant woman was concerned:

> These would include hemorrhage; infection from retained products; DIC, which is a condition where a woman can just start bleeding and can't stop because of her clotting factors being used up; embolus, where fluid or tissue can enter the mother's circulation. I think that one of the biggest things that we see or that there's a concern of is incompetent cervix, because the cervix is dilated so much more in this procedure than it is in the D & E. And there's some suggestion that, as you dilate the cervix larger, that there's more chance of incompetence. And I think Dr. Cook has actually seen that in his practice, where he's had women come in with cervical incompetence.
>
> (*Id.* at 33.)

Although Dr. Aultman believed that a physician would never need to use the banned procedure, Dr. Aultman stated that if something unusual happened that might cause a physician to consider use of the banned procedure, a legal variant of the technique would suffice. That is, the fetus could be killed in the uterus using an injection or the cord could be cut at the beginning of the procedure and then the remainder of the banned procedure could be effectuated on the then-dead fetus. (*Id.* at 12.)

Court's Exhibit 8; "2002 House Hearings"; Page: 186-87, 189-221; Date: July 9, 2002; Name: American Medical Association (AMA).

To advise its House of Delegates on the question of late-term abortions, the AMA caused a study to be done by a committee of doctors. The committee submitted a report to the AMA in June of 1997. The report was presented by Nancy W. Dickey, M.D. (Her qualifications and that of the other doctors are not readily evident.)

Among the most pertinent findings of the report were these: (1) the D & E method of abortion appears to be the safest at the relevant gestational ages for maternal mortality, but at 20 weeks and beyond the rates for induction and D & E abortions are similar (*id.* at 199); (2) the banned procedure is a variant of the D & E procedure (*id.* at 196); (3) relying upon the American College of Obstetricians and Gynecologists, the banned procedure "may minimize trauma to the woman's uterus, cervix, and other vital organs" (*id.* at 196); (4) from a review of the "scientific literature, there does not appear to be any identified situation in which [the banned procedure] is the only appropriate procedure to induce abortion" (*id.* at 203); and (5) the procedure should be avoided "unless alternative procedures pose materially greater risk to the woman[,]" and the report emphasized that "[t]he physician, must, however, retain the discretion to make that judgment, acting within standards of good medical practice and in the best interests of the patient." (*Id.*)

On April 5, 2000, Dr. Dickey, on behalf of the AMA, issued a public statement. In that statement, Dr. Dickey stated that the banned procedure was "broadly disfavored—both by experts and the public[,]" the banned procedure "is never the only appropriate

procedure[,]" and it "has no history in peer reviewed medical literature or in accepted medical practice development." (*Id.* at 186.)

Court's Exhibit 8; "2002 House Hearings"; Page: 220-21, 231, 233; Date: July 9, 2002; Name: American College of Obstetricians and Gynecologists (ACOG).

ACOG convened a select panel of its doctor-members to study the use of the banned procedure. (The qualifications of the select panel are not evident from the congressional record.) The report of the panel was approved by Executive Board of ACOG on January 12, 1997.

The panel defined the banned procedure this way:

> The American College of Obstetricians and Gynecologists (ACOG) believes the intent of such legislative proposals is to prohibit a procedure referred to as "Intact Dilatation and Extraction" (Intact D & X). This procedure has been described as containing all of the following four elements:
>
> 1. deliberate dilatation of the cervix, usually over a sequence of days;
> 2. instrumental conversion of the fetus to a footling breech;
> 3. breech extraction of the body excepting the head; and
> 4. partial evacuation of the intracranial contents of a living fetus to effect vaginal delivery of a dead but otherwise intact fetus.
>
> Because these elements are part of established obstetric techniques, it must be emphasized that

> unless all four elements are present in sequence, the procedure is not an intact D & X.

(*Id.* at 231.)

The panel indicated that when "abortion is performed after 16 weeks, intact D & X is one method of terminating a pregnancy." (*Id.*) However, it was unknown how many of these procedures are actually performed. (*Id.*) The panel "could identify no circumstances under which this procedure . . . would be the only option to save the life or preserve the health of the woman." (*Id.* at 232.) On the other hand, the panel stated, "[a]n "intact D & X . . . may be the best or most appropriate procedure in a particular circumstance to save the life or preserve the health of a woman . . . .'" (*Id.*)

In October of 1999, Stanley Zinberg, M.D., Vice President of Clinical Activities of ACOG, wrote the Senate. He said that "there are rare occasions when Intact D & X is the most appropriate procedure[,]" and "[i]n these instances, it is medically necessary." (Def.'s Ex. 897, at S12982.)

On February 13, 2002, ACOG reaffirmed its position. Although "a select panel convened by ACOG could identify no circumstances under which intact D & X would be the *only* option to protect the life or health of a woman, intact D & X 'may be the best or most appropriate procedure in a particular circumstance to save the life or preserve the health of a woman . . . .'" (Ct.'s Ex. 8, at 233 (quoting its 1997 report) (emphasis in the original).)

Defendant's Exhibit 516; "March 10, 2003 Senate Debate"; Page: S3385-86; Date: March 10, 2003; Name: Natalie E. Roche, M.D. and Gerson Weiss, M.D.

Dr. Weiss was Professor and Chair of the Department of Obstetrics and Gynecology and Women's Health at New Jersey Medical College. Dr. Roche was an assistant professor of obstetrics at that school. Both actively practiced.

Among other things, the doctors stated that the D & E method is the standard and preferred approach to abortions in the second trimester and is safer than induction abortions. They believed the legislation could be used to ban the use of the D & E procedure because the "D & X is merely a variant of [the] D & E." (*Id.* at 3385.)

Acknowledging that there is a "dearth of data" regarding the banned procedure, the doctors believed that the procedure "is sometimes a physician's preferred method of termination" because: (1) "it offers a woman the opportunity to see the intact outcome of the abortion of a desired pregnancy thus speeding the grieving process"; (2) "it provides a greater chance of acquiring valuable information regarding hereditary illness and fetal anomaly"; and (3) it "involves less use of sharp instruments in the uterus, providing a lesser chance of uterine perforations or tears and cervical lacerations." (*Id.* at S3385-86.)[21]

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[21] This letter appears similar to another letter sent by numerous doctors under the letterhead "Physicians for Reproductive Choice." (Def.'s Ex. 519, at S3657.)

Defendant's Exhibit 517; "March 11, 2003 Senate Debate"; Page: S3471-72; Date: March 11, 2003; Name: Lorne A. Phillips, Ph.D.

From the Kansas Department of Health and the Center for Health and Environmental Statistics, a letter dated March 24, 2000, addressed to "Dear Interested Party" and authored by Lorne A. Phillips, Ph.D., together with an attachment, was inserted into the record by Senator Brownback, a supporter of the ban.[22] Among other things, the letter and the related attachment presented a "preliminary analysis" of "selected" abortion statistics regarding the use of an undefined surgical abortion method, called by the State of Kansas, the "Partial Birth" procedure. It presented other abortion statistics for that same year as well.

In 1999, of the 12,421 abortions reported to the state agency, 841 (5.8%) were done between 13 and 16 weeks, 564 (4.5%) were done between 17 and 21 weeks, and 574 (4.6%) were done 22 weeks and after. (*Id.* at S3472.) The vast majority of the abortions (about 84%) were done at 12 weeks or earlier.

In terms of the methods of abortion, a large majority (about 86%) were completed by suction curettage. (*Id.*) "D & E" abortions accounted for 7.5% (929) of the total; there were no hysterotomies or hysterectomies; "Digoxin-Induction" abortions accounted for 3.0% (366) of the total; and "'Partial Birth' Procedure[s]" accounted for 1.5% (182) of the total. (*Id.*)

In every one of the 182 "partial-birth abortions" conducted in 1999 in Kansas, the physician certified that "there is a reasonable probability that this pregnancy

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[22] The trial evidence indicated that Dr. Carhart sometimes performed abortions in Kansas. (Tr. 595, Test. Dr. Carhart.)

may be viable." (*Id.*) In every "partial- birth abortion" conducted in 1999, the physician also certified that the abortion was necessary to "[p]revent substantial and irreversible impairment of a major bodily function," that in every case the impairment was "mental" rather than "physical," and that certification was based upon the patient's history and physical examination. (*Id.*) It was also based upon the "referral and consultation by an unassociated physician," such that "the attending physician believes that continuing the pregnancy will constitute a substantial and irreversible impairment of the patient's mental function." (*Id.*)

Defendant's Exhibit 519; "March 13, 2003 Senate Debate"; Page: S3657; Date: March 13, 2003; Felicia H. Stewart, M.D.

Dr. Stewart was a former Deputy Assistant Secretary for Population Affairs for the United States Department of Health and Human Services. She had represented the United States at an international conference on population control. She was an adjunct professor in the Department of Obstetrics and Gynecology and Reproductive Sciences at the University of California, San Francisco, where she served as Co-Director of the Center for Reproductive Health Research and Policy. She previously served as the Director of the Reproductive Health Program of the Henry J. Kaiser Family Foundation.

She opposed the legislation because she believed it would force women in the second trimester to have more dangerous procedures, most particularly hysterectomies. Due to the criminal penalties in the law, Dr. Stewart believed that doctors would start using hysterectomies or hysterotomies because they would

fear criminal prosecution if they performed safer D & E or D & X abortions even when women suffer "grievous underlying medical conditions." (*Id.* at S3657.)

Court's Exhibit 9; "2003 House Hearings"; Page: 6-10, 40-43; Date: March 25, 2003; Name: Mark Neerhof, D.O.

Dr. Neerhof was trained as an osteopathic physician. He was an associate professor of obstetrics and gynecology at Northwestern University Medical School and was an attending physician in the Department of Obstetrics and Gynecology, division of Maternal-Fetal Medicine, at Evanston Northwestern Health Care in Evanston, Illinois. He had been practicing for 14 years. Dr. Neerhof did not claim to do abortions.

Among other things, Dr. Neerhof stated the banned procedure is neither safe nor necessary. He gave the following reasons: (1) there are no credible medical studies that attest to the safety of the procedure (*id.* at 9); (2) the banned procedure increases the risk of uterine rupture and other associated and serious problems because of the need to convert the fetus to a footling breech (*id.*); (3) the use of scissors to puncture the fetal skull is "blind" to the surgeon, and the procedure increases the risk of laceration and bleeding (*id.*); and (4) other procedures are available to terminate pregnancy at later stages, so the risks of the banned procedure are unnecessary. (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 100-01; Date: March 25, 2003; Name: Phillip D. Darney, M.D.

Dr. Darney was a professor and Chief of Obstetrics, Gynecology and Reproductive Sciences at San Francisco General Hospital and at the University of California, San Francisco. Dr. Darney performed abortions

in hospitals. The department he supervised performed about 2,000 abortions a year, particularly for poor women.

In a detailed letter, he described his use of the banned procedure and why he believed that the procedure was both safe and needed. The letter, addressed to Senator Feinstein, was first referenced in the March 12, 2003, floor debate in the Senate. (Def.'s Ex. 518, at S3600.) It was quoted by Senator Feinstein to explicitly rebut Senator Santorum's assertion that he had never been provided with a specific example of a situation where the banned procedure "'would be the best, this would be appropriate, this would be medically indicated.'" (*Id.* at S3600 (Sen. Feinstein quoting Sen. Santorum).)

Because of its significance and the fact that it generated several critical responses from other doctors, I reproduce the substance of Dr. Darney's letter regarding the safety of and need for the banned procedure:

> I write to provide examples of the need for a "medical exemption" to the proposed restriction of use of the so-called "partial birth abortion" technique which is now before the Senate. (The medical term for the technique is "intact D & E").
>
> I am Chief of Obstetrics and Gynecology at San Francisco General Hospital (SFGH), where my department provides about 2,000 abortions yearly to poor women from throughout Northern California. Patients who are in the second trimester and who have special medical problems are referred to SFGH for treatment because our

staff has special competence in second trimester abortion and because we can provide specialized care for women who are more likely to have a complicated pregnancy termination. Although I have not reviewed medical records in order to count the number of times we have employed intact D & E, I will provide examples of cases in which the technique was critical to safe conduct of our surgery:

- A 25 year old with two previous vaginal deliveries and bleeding placenta previa and a clotting disorder at 20 weeks was referred for termination of pregnancy. After checking her coagulation parameters and making blood available for transfusion, we dilated the cervix overnight with Laminaria and planned uterine evacuation when adequate dilation was achieved or bleeding became too heavy to replace. Within 12 hours cervical dilation was 3 cm and heavy bleeding had begun. We removed the placenta quickly and used the "intact D & E" approach to complete the abortion and accomplish quick control of blood loss. The patient required a transfusion of two units of whole blood and was discharged the next day in good health.

- A 38 year old with three previous cesarean deliveries and evidence of placenta accreta was referred for pregnancy termination at 22 weeks because her risk of massive hemorrhage and hysterectomy at the time of delivery was correctly estimated at about 75%. After SFGH sonographic

> studies confirmed placenta previa and likely accreta we undertook cervical dilation with laminaria and made blood available in case transfusion was required. To reduce the 75% probability of emergency hysterectomy in the situation of disseminated intravascular coagulation (DIC is quite likely with accreta) we decided to empty the uterus as quickly as possible with the intact D & E procedure and treat hemorrhage, if it occurred, with uterine artery embolization before our patient lost too much blood and hysterectomy was our only option. This approach succeeded and she was discharged in good health two days later.
>
> These two patients provide examples from my memory of situations in which the "intact D & E" technique was critical to providing optimal care. I am certain that a review of our hospital records would identify cases of severe pre-eclampsia, for example, in which "intact D & E" was the safest technique of pregnancy termination.
>
> (Ct.'s Ex. 9, at 100-01.)

Court's Exhibit 9; "2003 House Hearings"; Page: 102; Date: March 25, 2003; Name: Daniel J. Wechter, M.D.[23]

Dr. Wechter was a board-certified specialist in maternal-fetal medicine. He was an assistant professor in obstetrics and gynecology at the Michigan State College of Human Medicine and Co-Director of

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[23] The doctor's letter was also discussed in the Senate floor debate. (Def.'s Ex. 519, at S3654.)

Maternal-Fetal Medicine in Saginaw, Michigan. Dr. Wechter did not claim to do abortions.

He disagreed with Dr. Darney that use of the banned procedure is ever necessary or safe. In particular, he believed that the second patient described by Dr. Darney could have carried the fetus longer and delivered a healthy child by repeat cesarean section followed by hysterectomy.

Court's Exhibit 9; "2003 House Hearings"; Page: 104; Date: March 25, 2003; Name: Watson A. Bowes, Jr., M.D.

I have previously described Dr. Bowes' background. In this letter, he confirmed that he did not perform abortions.

Dr. Bowes acknowledged "that there can be differences of opinion on this matter." (*Id.*) But, he believed that the "important point is that if the technique of partial-birth abortion ('intact D & E') were not available there would be alternative methods available to terminate the pregnancies described by Dr. Darney with comparable levels of risk to the patients." (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 105; Date: March 25, 2003; Name: Steve Calvin, M.D.[24]

Dr. Calvin was a specialist in maternal-fetal medicine with 23 years of experience. He taught and did research at the University of Minnesota, where he was co-chair of the Program in Human Rights in Medicine. Although rarely, Dr. Calvin did abortions and he used

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[24] Dr. Calvin's letter was also discussed in the Senate floor debate. (Def.'s Ex. 519, at S3653.)

the banned procedure when necessary to preserve the life (but not the health) of the pregnant woman.

"In the rare circumstances when continuation of pregnancy is life-threatening to a mother I will end the pregnancy." (*Id.*) "If an emergent life-threatening situation requires emptying the uterus before fetal viability then I will utilize a medically appropriate method of delivery, including intact D & E." (*Id.*)

"Though they are certainly complicated, the two cases described by Dr. Darney describe situations that were not initially emergent." (*Id.*) Because the law banning the procedure contains "an exemption for situations that are a threat to the life of the mother[,]" and because "an additional medical exemption [regarding maternal health] is redundant[,]" Dr. Calvin did not believe the law threatened the "provision of excellent medical care to pregnant women and their unborn children." (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 106; Date: March 25, 2003; Name: Nathan Hoeldtke, M.D.

Dr. Hoeldtke was a board-certified obstetrician and gynecologist. He was the Medical Director for Maternal-Fetal Medicine at Tripler Medical Center in Hawaii. Dr. Hoeldtke did not claim to do abortions.

Dr. Hoeldtke disagreed with Dr. Darney. In particular, (1) in both cases described by Dr. Darney, "a standard D & E could have been performed without resorting to the techniques encompassed by the intact D & X procedure [,]" (*id.*); and (2) regarding the second case described by Dr. Darney, "[t]he good outcome described by Dr. Darney" could have been accomplished by "a near term delivery in this kind of patient[.]" (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 107-08; Date: March 25, 2003; Name: Byron C. Calhoun, M.D. [25]

Dr. Calhoun was a board-certified obstetrician and gynecologist. He had served as a visiting clinical professor or an adjunct professor at various academic hospitals. He had written many peer-reviewed articles and presented over 100 papers. Dr. Calhoun did not claim to do abortions himself.

Dr. Calhoun did not agree with Dr. Darney. Dr. Calhoun not only disagreed with Dr. Darney's use of the banned procedure, but he did "not understand why he was performing the abortions" at all. (*Id.* at 107.)

Court's Exhibit 9; "2003 House Hearings"; Page: 109-10; Date: March 25, 2003; Name: T. Murphy Goodwin, M.D. [26]

Dr. Goodwin was the Chief of the Division of Maternal-Fetal Medicine at the Department of Obstetrics and Gynecology at the University of Southern California. He had published numerous papers and book chapters regarding pregnancy complications. He directed the obstetrics service at the Los Angeles County Women's and Children's Hospital, the major referral center for complicated cases among indigent and under-served women in Los Angeles. He did not perform abortions.

"Mindful of Dr. Darney's broad experience with surgical abortion," Dr. Goodwin strongly disagreed with

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[25] The doctor's letter was also discussed in the Senate floor debate. (Def.'s Ex. 519, at S3653.)

[26] The doctor's letter was also discussed in the Senate floor debate. (Def.'s Ex. 519, at S3654.)

him. Initially, the cases described by Dr. Darney "are infrequent" and "there is no[] single standard for management" of those cases. (*Id.* at 109.) According to Dr. Goodwin, "the vast majority of physicians confronting either of these cases would opt for careful hysterotomy as the safest means to evacuate the uterus." (*Id.* at 110.) In fact, Dr. Goodwin had never encountered "a case in which what has been described as partial birth abortion is the only choice, or even the better choice among alternatives, for managing a given complication of pregnancy." (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 111-12; Date: March 25, 2003; Name: Susan E. Rutherford, M.D. [27]

Dr. Rutherford was board-certified in maternal-fetal medicine. She had 17 years of experience in maternal-fetal medicine. Dr. Rutherford did not claim to do abortions.

She believed that Dr. Darney was lucky that the women he described had good outcomes and that those women were "at extremely high risk for catastrophic life-threatening hemorrhage with any attempt at vaginal delivery." (*Id.* at 111.) She did "not agree that D & X was a necessary option." (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page: 113-16; Date: March 25, 2003; Name: Camilla C. Hersh, M.D.

Dr. Hersh was a board-certified obstetrician and gynecologist with 13 years of experience. She had served as a clinical assistant professor of obstetrics and gynecology at Georgetown University. She was a

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[27] The doctor's letter was also discussed in the Senate floor debate. (Def.'s Ex. 519, at S3653-54.)

member of PHACT and she did not claim to do abortions.

She believed the banned procedure was dangerous. In particular, she believed the forced dilation of the cervix over a number of days may lead to an incompetent cervix and that such a time requirement is likely to make the banned procedure irrelevant to saving the life of a pregnant woman in the case of an emergency. Furthermore, she believed the banned procedure risks serious infection.

Court's Exhibit 9; "2003 House Hearings"; Page: 117; Date: March 25, 2003; Name: Lewis J. Marola, M.D.

Dr. Marola, together with his partner, claimed 60 years of "ob-gyn" practice experience. His statement was addressed to the New York legislature although it was included in the House record. Dr. Marola did not claim to do abortions.

Dr. Marola was of the view that the procedure was dangerous because of the conversion of the fetus to the breech position. That action may cause a dangerous condition, that is, "an abruption of the placenta and amniotic fluid embolism." (*Id.*) He believed that an induction abortion would be "far safer." (*Id.*)

Court's Exhibit 9; "2003 House Hearings"; Page 186-88; Date: March 25, 2003; Name: Vanessa Cullins, M.D.

Dr. Cullins was a board-certified obstetrician and gynecologist. She received her medical degree and master's degree in public health from Johns Hopkins University. She received her MBA from the University of Pennsylvania, Wharton School. She previously served as an assistant professor at Johns Hopkins University School of Medicine and was an

attending physician in obstetrics and gynecology at the institution. She had published extensively and made numerous presentations in the area of obstetrics and gynecology. At the time her testimony was presented to the House, she was Vice President of Medical Affairs for Planned Parenthood Federation of America. Although there are indications in her submission to Congress that she probably performed abortions, it is not entirely clear from her statement whether she had in fact performed those procedures.

Dr. Cullins believed the banned procedure is both safe and needed and that the Congressional Findings to the contrary are incorrect. In particular, she stated:

> D & X abortions offer a variety of potential safety advantages over other procedures used during the same gestational period.
>
> First, compared to D & E abortions, D & X involves less risk of uterine perforation or cervical laceration because it requires fewer passes into the uterus with sharp instruments.
>
> Second, there is considerable evidence that D & X reduces the risk of retained fetal tissue, a serious complication that can cause maternal death or injury.
>
> Third, D & X may be safer than available alternatives for women with particular health conditions. As ACOG has concluded, D & X may be "the best or most appropriate procedure in a particular circumstance to save the life or preserve the health of a woman." D & X may also be the most appropriate method in the presence of certain fetal indications. For example, D & X "may be

especially useful in the presence of fetal abnormalities, such as hydrocephalus" because it entails reducing the size of the fetal skull "to allow a smaller diameter to pass through the cervix, thus reducing risk of cervical injury." In addition, "intactness allows unhampered evaluation of structural abnormalities" in the fetus and can thus aid in diagnosing fetal anomalies. Finally, an intact fetus can "aid . . . patients grieving a wanted pregnancy by providing the opportunity for a final act of bonding."

Fourth, D & X procedures usually take less time than other abortion methods used at a comparable stage of pregnancy, which can have significant health advantages.

Based on my clinical experience and knowledge of this field, there is no reliable medical evidence to support the claim in H.R. 760's Findings that D & X endangers maternal health. (Finding Number (14)(A).) The Findings claim that the amount of cervical dilatation involved in D & X procedures heightens the risk of cervical incompetence or cervical trauma. Many D & E procedures, however, involve similar amounts of dilatation, and of course childbirth involves even more dilatation. The concern stated in the Findings about the risks posed by the physician repositioning the fetus into a footling breech, is similarly misplaced. Some clinicians recommend repositioning the fetus in some D & Es, depending on how the fetus initially presents. Moreover, the Findings suggest that the use of sharp instruments to collapse the head in a D & X is more dangerous than repeated instrument passes into the uterus in a D & E. But the physician can

visualize and feel the surgical field during a D & X and therefore the instrument can be carefully guided, thus minimizing risk to the woman.

Finally, H.R. 760's sponsors attempt to rely on the lack of comparative studies or peer-reviewed articles relating to the D & X procedure. (Finding Number (14)(B).) However, the development and medical acceptance of safe surgical procedures is not always achieved by orderly and controlled testing. For example, the most common abortion procedures used today were all developed years ago by physicians who slightly varied their technique to achieve greater safety for their patients, found that the variation did improve the safety, and then taught the new technique to their colleagues. Similarly, open heart surgery (as an example) was not tested in a randomized, controlled way. Rather, physicians figured out how to perform the surgery, and did so. As patients lived, physicians kept doing it, and got better at it.

(*Id.* at 187-88 (footnotes omitted).)

Court's Exhibit 9; "2003 House Hearings"; Page 191-95; Date: March 25, 2003; Name: Anne R. Davis, M.D.

Dr. Davis, a member of ACOG, was an assistant professor in clinical obstetrics and gynecology at Columbia University. In addition, she provided direct patient care. She had published in the area of obstetrics and gynecology and was board-certified. It is not clear whether Dr. Davis had performed abortions.

Dr. Davis was of the opinion that the banned procedure is safe and needed and that the Congressional Findings to the contrary are incorrect. Her statement mirrored Dr. Cullin's statement. (*Id.* at 194.)

Court's Exhibit 10; "2003 House Report"; Page 14-23, 107-08, 127, 151-53; Date: April 3, 2003; Name: None.

Among other things, this House report purports to summarize, from the viewpoint of the majority and minority, the information before Congress regarding the need for and relative safety of the banned procedure. References to some of the findings of the various district courts that have considered the need for and safety of the procedure are sprinkled throughout the two opposing summaries. The report also contains two briefs presented to the Supreme Court in *Stenberg v. Carhart*, one from ACOG and the other from the Association of Physicians and Surgeons and others, on the need for and safety of the procedure.

The majority summary may contain a significant factual error regarding the views of Dr. Warren Hern, the author of a leading textbook on abortion, as it concerns the need for and safety of the banned procedure. For example, the majority summary states that: "Dr. Warren Hern has testified that he had 'very serious reservations about this procedure[']and that 'he could not imagine a circumstance in which this procedure would be the safest.'" (*Id.* at 18 & n. 90.)

As previously described in this summary, Dr. Hern did not testify although he was present in the hearing room, and apparently ready and willing to do so. The supposed views of Dr. Hern were recounted by another doctor who read from a newspaper published by the AMA which in turn purported to quote Hern's views. As contrasted with this third-party account, Dr. Hern submitted a detailed written statement which, among other things, opposed the ban and listed the possible advantages to the pregnant woman of the banned procedure. Indeed, Hern used a variant of the banned

procedure, but he first killed the fetus using an injection.

C. MEDICAL EVIDENCE PRESENTED AT TRIAL

1. THE PROCEDURES

Out of a total of 23 physician-witnesses who testified, 18 of them testified primarily about the need for and safety of the procedure.[28] The testimony of those 18 witnesses is summarized below.

a. MECHANICS

i. PLAINTIFF DR. LEROY CARHART

Dr. Carhart has performed abortions since 1988, and he estimates that he provides approximately 1,400 abortions per year. He performs medical abortions, as well as abortions using vacuum aspiration, D & E, and intact D & E techniques. (Tr. 593-94, Test. Dr. Carhart.)

(a) DILATION

Dr. Carhart testified that he generally begins performing his D & E procedure at 12 to 14 weeks. From 12 through 15 weeks, he uses misoprostol,[29] a medi-

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[28] Of the five others, Dr. Cain testified as a spokesperson for ACOG. She, too, testified about the need for and safety of the procedure. Dr. Baergen testified on pathology issues. Drs. Howell and Mazariegos testified on the development of surgical techniques. Dr. Anand testified about fetal-pain issues. The views of these five additional physician-witnesses are summarized in a later portion of this opinion.

[29] Misoprostol is a medication originally designed for the treatment of peptic ulcers, but it also induces uterine contractions and serves as a cervical ripening agent—that is, the cervix becomes

cation that is placed in the patient's cheek cavity, to dilate the patient's cervix before the procedure is performed later that same day. From 16 weeks to the end of the 19th week, Dr. Carhart uses laminaria[30] to dilate the cervix, a two-day process in which laminaria are placed in the cervix, the patient is sent home overnight to resume normal activities with some minor restrictions, and the patient returns the next day for the procedure. After 19 weeks, the laminaria-dilation process is repeated for two days, with the procedure being performed on the third day. Dr. Carhart has not detected any long-term threat to his patients by using this "slow-dilation" method. (Tr. 602, 604-07, 609-11, 683, Test. Dr. Carhart.)

According to the plaintiffs and their expert, there are three aspects to dilation: (1) ripening, or the softening of the tissue such that it will stretch rather than tear; (2) the degree of relaxation or amount of opening of the cervix; and (3) the length of the cervix. (Tr. 748, Test. Dr. Carhart.) The amount of dilation that occurs is not predictable and depends upon the initial firmness, length, and degree of opening of the cervix; the amount of fluid in the patient's cervix; the patient's age; whether the patient has previously had vaginal

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soft and dilates due to a chemical process in which the protein content of the cervix breaks down and the water content of the cervix increases. (Tr. 1672, Test. Dr. Lockwood.)

[30] A "laminaria" is a "[s]terile rod made of kelp . . . which is hydrophilic, and, when placed in the cervical canal, absorbs moisture, swells, and gradually dilates the cervix." *Stedman's Medical Dictionary* 964 (27th ed. 2000). Laminaria range from 1/8 to 1/4 of an inch in thickness; the amount of expansion in each laminaria is variable; and the same number and size of laminaria inserted in many different women would yield many different amounts of dilation. (Tr. 221-22, Test. Dr. Fitzhugh.)

deliveries; gestational age of the fetus; and the patient's pain tolerance. (Tr. 608-09, Test. Dr. Carhart; Tr. 222-23, Test. Dr. Fitzhugh; Tr. 504-05, Test. Dr. Knorr; Tr. 334, Test. Dr. Vibhakar; Tr. 40, Test. Dr. Doe.)

At 14 weeks and later, Dr. Carhart's goal "is to remove the fetus intact, or as intact as possible," so he seeks to achieve cervical dilation in the amount of two-thirds of the biparietal[31] diameter of the fetus. (Tr. 608, Test. Dr. Carhart.) While Dr. Carhart attempts to achieve maximum dilation in every case—that is, enough dilation to deliver the entire fetus, including the head—the "law of diminishing returns" prevents him from extending the laminaria-dilation process an extra day for his patients who are 17 weeks or less because of the risks of infection occurring overnight, bleeding, and because the fetal skin begins to break up. (Tr. 608-09 & 734-35, Test. Dr. Carhart.)

(b) REMOVAL OF FETUS

After sufficient dilation is achieved in his 12- to 13-week patients, Dr. Carhart uses a cannula[32] to remove the amniotic fluid, fetus, and placenta, and then uses a curette[33] to ensure that all fetal tissue has been

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[31] "Biparietal" means "[r]elating to both parietal bones of the skull." *Stedman's Medical Dictionary* 207 (27th ed. 2000).

[32] A "cannula" is a "tube that can be inserted into a cavity, usually by means of a trocar filling its lumen; after insertion of the [cannula], the trocar is withdrawn and the [cannula] remains as a channel for the transport of fluid." *Stedman's Medical Dictionary* 278 (27th ed. 2000).

[33] A "curette" is an "[i]nstrument in the form of a loop, ring, or scoop with sharpened edges attached to a rod-shaped handle, used for curettage." *Stedman's Medical Dictionary* 436 (27th ed. 2000).

removed from the patient's uterus. With 12- to 13-week patients who have previously delivered children, dilation is such that the "membranes are bulging" before the procedure begins and the fetus "expel[s] in total or in part" when the membranes are ruptured, requiring Dr. Carhart to "remove that part and then complete the abortion." "[V]ery, very frequently" the fetus has a heartbeat at the time the fetus, or part of it, "expels." (Tr. 614-15, Test. Dr. Carhart.) The fetal heartbeat can be detected by constant ultrasound observation, which Dr. Carhart uses from 5 to 24 weeks. (Tr. 616, Test. Dr. Carhart.)

For patients who have achieved sufficient dilation with laminaria, Dr. Carhart performs the procedure by first removing the laminaria. He then uses a speculum[34] and tenaculum[35] to pull the cervix down further into the vaginal cavity, thereby decreasing the length of the "tunnel you're looking through" and giving Dr. Carhart a better "field of vision." The distance Dr. Carhart is able to achieve between the cervix and the vaginal introitus[36] ("opening") varies anywhere from six centimeters to the cervix actually being outside the vaginal opening, the latter of which occurs five to ten times per year. (Tr. 612-14, Test. Dr. Carhart.)

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[34] A "speculum" is an "instrument for exposing the opening of any canal or cavity in order to facilitate inspection of its interior." *Stedman's Medical Dictionary* 1665 (27th ed. 2000).

[35] A "tenaculum" is a "surgical clamp designed to hold or grasp tissue during dissection, commonly used to grasp the cervix." *Stedman's Medical Dictionary* 1793 (27th ed. 2000).

[36] "Introitus" means "[t]he entrance into a canal or hollow organ, as the vagina." *Stedman's Medical Dictionary* 918 (27th ed. 2000).

Dr. Carhart then ruptures the membranes and removes the fetus with forceps, using a twisting motion in an attempt to remove the fetus intact or as intact as possible. (Tr. 616-19, Test. Dr. Carhart.) Patients' cervixes respond differently as the fetus is removed, which affects whether Dr. Carhart may remove the fetus intact or in pieces. (Tr. 749, Test. Dr. Carhart.)

Per year, Dr. Carhart estimates that he delivers four to six fetuses[37] that are between 13 and 18 weeks of gestation intact or to the point where the fetal body, save for the head, is in the patient's vaginal cavity or outside her body. (Tr. 726-29, Test. Dr. Carhart.) Because these deliveries occur before 18 weeks—the point at which Dr. Carhart induces fetal demise before performing an abortion—Dr. Carhart has observed the existence of a "very slow" fetal heartbeat[38] in these fetuses, but has never seen signs of movement because these fetuses are "probably unconscious" from administration of anesthesia and misoprostol to the patient that causes "enough constr[i]ction of the uterus on the fetus to minimize circulation and at least obtund the fetus." In this gestational age range, Dr. Carhart attempts to cause fetal demise by cutting the umbilical cord if the cord prolapses after he ruptures the mem-

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[37] Dr. Carhart also testified that during his 14- to 17-week procedures, fetuses "come[] out intact up to the level of the calvarium" on an average of once a month, but Dr. Carhart is successful at actually removing fetuses completely intact less than 5% of the time at these gestational ages. (Tr. 617 & 619-20, Test. Dr. Carhart.) "Calvarium" is a term "[i]ncorrectly used for calvaria," which is the "upper domelike portion of the skull." *Stedman's Medical Dictionary* 271 (27th ed. 2000).

[38] Dr. Carhart testified that the fetuses of his 16- and 17-week patients are normally "alive at the time of the final delivery." (Tr. 617, Test. Dr. Carhart.)

branes and if the cord is accessible. Dr. Carhart believes that the cause of death in fetuses he has delivered intact between 13 and 18 weeks of gestation was oxygen deprivation, although Dr. Carhart can never be sure which step during an abortion will cause fetal demise. (Tr. 726-27, 729-31, 746, Test. Dr. Carhart.)

Beginning at 18 weeks, Dr. Carhart performs what he calls a "combination of induction techniques and surgical D & E techniques." He begins by injecting the fetus with lidocaine and digoxin anywhere from 24 to 36 hours prior to the time the procedure is scheduled to be completed in order to kill the fetus before he begins the procedure. For his 18- and 19-week patients, Dr. Carhart removes the laminaria that were placed the prior day. If dilation in the amount of 65 "French"[39] has not been achieved by that point, Dr. Carhart mechanically dilates the patient's cervix as far as he can "without feeling resistance" and then ruptures the membranes. Dr. Carhart then places four Cytotec[40] tablets in the patient's rectum; administers sedation and pitocin or oxytocin intravenously; and waits for the patient to deliver the fetus intact, which happens approximately 75% of the time at 18 and 19 weeks of gestation. If the patient has not delivered the fetus within three to four hours, Dr. Carhart removes it using the D & E technique he uses for 14-and 15-week patients. If the patient delivers the fetus and placenta intact, Dr. Carhart finishes by performing a D & C to

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[39] "French" in this context refers to a scale "for grading sizes of sounds, tubes, and catheters as based on a diameter of 1/3 mm equaling 1 F on the scale (e.g., 3 F. 1 mm)." *Stedman's Medical Dictionary* 1596 (27th ed. 2000).

[40] Cytotec is also known as misoprostol. (Tr. 536, Test. Dr. Knorr.)

remove retained tissue that is subject to infection and to check the condition of the cervix, repairing tears if necessary. If the patient has delivered only the fetus, Dr. Carhart will remove the remaining placenta and perform a D & C. (Tr. 607-08, 620-24, 643, 696, Test. Dr. Carhart.)

Dr. Carhart does not normally convert the fetus to a footling breech during his abortion procedures; rather, he "take[s] the fetus as it's presenting." (Tr. 657-60 & 662, Test. Dr. Carhart.) If Dr. Carhart cannot deliver an intact fetus pursuant to his normal procedures, he must remove the fetus from the patient in a piecemeal fashion; that is, he uses his hands and forceps to grasp individual fetal parts, pulls them down through the cervical os,[41] and uses a rotating motion to dismember various parts from the fetus. Dr. Carhart testified that the dismemberment procedure gets more difficult as gestational age increases due to the increasing toughness of the fetal tissue. (Tr. 691, 694-95, 697-98, Test. Dr. Carhart; Tr. 1276, Test. Dr. Cook (before 20 weeks, fetal tissue is much more fragile than at 24 weeks; skin is more easily disrupted, fetus bruises more easily, and disarticulation or trauma can occur more easily).)

It is "extremely rare" for Dr. Carhart to use an instrument to remove the fetus in patients who are past 20 weeks and who are not adequately dilated on the third day of the process. Instead, Dr. Carhart prefers to "do things to get better dilation and do things to get a little better uterine contraction so that it does, indeed, go ahead and complete spontaneously." (Tr. 722-23,

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[41] "Os" is a "[t]erm applied . . . to an opening into a hollow organ or canal." *Stedman's Medical Dictionary* 1279 (27th ed. 2000).

Test. Dr. Carhart.) Most (90%) of Dr. Carhart's patients who are beyond 20 weeks will expel their fetuses without the need for any instrumentation by Dr. Carhart during the D & E procedure. (Tr. 702-04, Test. Dr. Carhart.)

(c) COMPRESSION OF FETAL SKULL

When Dr. Carhart performs his "combination of induction techniques and surgical D & E techniques," described above, 10% of his patients over 20 weeks expel the fetus up to its skull, at which point Dr. Carhart must "open the back of the skull and drain it" or compress the fetal skull in some manner to facilitate delivery. Dr. Carhart performs the same techniques when the fetal skull becomes lodged in the patient's cervical os after he has attempted to extract the fetus with instruments. Dr. Carhart rarely uses a cannula or suction to assist him in compressing the fetal skull. (Tr. 623, 689-91, 704-05, 707, Test. Dr. Carhart.) As described by Dr. Carhart:

> Very often when the head is tightly impacted into the cervix, there is going to be a chance of causing damage to try to put forceps around the skull to grab ahold of it to bring it out. If, indeed, enough of the posterior nuchal[42] region of the head is exposed, assuming that we are talking about a foot-first presentation, that I can safely and adequately drain the cavity of the fetus, then if I'm fairly sure by ultrasound and other pelvic evaluation it's not going to come out on its own,

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[42] The "nuchal" region is the area at the back, or nape, of the neck. *Stedman's Medical Dictionary* 1231 (27th Test. Dr.).

then I would elect to open the skull. If, on the other hand, if the cervix is relaxed enough which I can get around the skull and I can grasp it which obviously wouldn't be too often, it might just pass if it was relaxed enough, but if I could do that I would prefer to do that.

(Tr. 706, Test. Dr. Carhart.)

(d) MANNER OF PERFORMING PROCEDURES

In his 13- to just-before-18-week D & Es, Dr. Carhart's hand movements and use of instruments are the same, whether the doctor ultimately performs an intact D & E or a dismemberment D & E. "I still try to take small bites, I still try to progress the fetus through the canal. I try to be as gentle as possible whether or not it's going to be intact." (Tr. 731-32, Test. Dr. Carhart.) Even if Dr. Carhart has removed multiple pieces of the leg and abdomen areas of a fetus, he still attempts to keep the remainder of the fetus as intact as possible to avoid a "floating head"; that is, the fetal head becomes separated from the fetus and becomes lodged in the upper part of the uterus and is "virtually impossible to get out." (Tr. 733, Test. Dr. Carhart.)

At 12 through 17 weeks, Dr. Carhart "can normally remove" "two, three pieces" and "[he] can often get up to the base of the skull, then go back and remove the skull" or "[he] can often get both lower extremities and divide somewhere at the upper part of the spinal cord, removing abdominal organs and some even thoracic organs on the very first removal." (Tr. 627, Test. Dr. Carhart.) During this gestational age range, Dr. Carhart has encountered the situation "where the fetus has been not intact, partially dismembered," but "part

of the fetal trunk [past] the umbilicus has come outside the body of the mother." (Tr. 618, Test. Dr. Carhart.) In these situations, Dr. Carhart has torn the fetus apart at the level of the elbow, shoulder, scapula, and chest wall. (Tr. 618, Test. Dr. Carhart.) Approximately 25 to 40 times per year, Dr. Carhart extracts the fetus "up to the shoulders where [he has] to go in and do something else"—that is, tear that portion of the fetal body below the shoulders from that part of the body above the shoulders. (Tr. 728, Test. Dr. Carhart.)

Because abortions may not be performed in eastern Nebraska hospitals, Dr. Carhart maintains monitoring equipment, supplies, and experienced staff in his clinic in an attempt to provide hospital-like care. (Tr. 738-40, Test. Dr. Carhart.)

ii. PLAINTIFF DR. WILLIAM G. FITZHUGH

Dr. Fitzhugh has performed abortions since 1969, and he estimates that he provides approximately 70 abortions per week on patients who are in their first trimester and 5 to 7 abortions per week on second-trimester patients. He performs D & Cs, D & Es, and unintentional intact D & Es. (Tr. 212, 214, 270-71, Test. Dr. Fitzhugh.)

(a) DILATION

Dr. Fitzhugh testified that he generally accomplishes adequate dilation with one round of laminaria, combined with occasional use of mechanical dilators after the laminaria are removed if greater dilation is necessary. He recalls only two cases in 24 years in which he inserted a second round of laminaria and instructed the

patient to return the following day. (Tr. 231-32 & 273-74, Test. Dr. Fitzhugh.)

The number and size of laminaria that Dr. Fitzhugh uses to dilate his patients vary for each patient, depending upon gestational age, size of the cervix, comfort level of each patient, and condition of the cervix. (Tr. 229-30, Test. Dr. Fitzhugh.) Dr. Fitzhugh does not use "serial" laminaria—that is, multiple insertions of laminaria over two to three days—nor does he use Cytotec, misoprostol, or other prostaglandins[43] in conjunction with his dilations because he has learned in his medical career that "the least that you do safely is the best." (Tr. 232-33 & 272, Test. Dr. Fitzhugh.)

(b) REMOVAL OF FETUS

Dr. Fitzhugh breaks the amniotic sac and removes the amniotic fluid with a suction cannula, which shrinks the uterus and may lessen the risk of amniotic fluid emboli,[44] a condition in which amniotic fluid enters maternal circulation, causing sudden shock. (Tr. 239-40, Test. Dr. Fitzhugh.) After Dr. Fitzhugh uses suction to remove the amniotic fluid, either the umbilical cord or another part of the fetus will come through the cervix. When Dr. Fitzhugh begins to remove the fetus during a D & E procedure, the fetus is usually alive. (Tr. 251-52

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[43] Prostaglandins cause uterine contractions and uterine activity. They can be used to prepare the cervix for a surgical abortion procedure by utilizing the physiologic process of uterine contractions which lead to gradual cervical change. (Tr. 1359, Test. Dr. Cook.)

[44] Amniotic fluid embolism is a condition in which amniotic fluid enters the bloodstream of the mother, causing cardiovascular collapse and a breathing abnormality. (Tr. 1724-25, Test. Dr. Lockwood.)

& 254, Test. Dr. Fitzhugh.) If the umbilical cord presents itself first, Dr. Fitzhugh detaches it; otherwise, he grasps various fetal parts with ring forceps, using a twisting motion to remove as much tissue as possible at once. This procedure may lead to detachment of the fetal part that has passed through the cervix from the rest of the fetus, which is still inside the uterus. In order to accomplish dismemberment of the fetus entirely inside the uterus, Dr. Fitzhugh would be required to insert both a stabilizing instrument and a pulling instrument in the uterus at one time, which is generally not possible. (Tr. 240-42, Test. Dr. Fitzhugh.)

In typical cases, the placenta will then deliver, followed by the fetal head. Dr. Fitzhugh cleans the uterus with suction, rather than a curette, because he is concerned about removing too much of the myometrium.[45] (Tr. 243, Test. Dr. Fitzhugh.) Suction alone is sufficient for Dr. Fitzhugh to remove fetuses up to 15 to 16 weeks, after which forceps must be used to grasp the fetus and remove it piece-by-piece from the uterus. (Tr. 272, Test. Dr. Fitzhugh.)

Dr. Fitzhugh estimates that when he begins to remove the fetus during a second-trimester abortion, the distance between the cervix and vaginal opening is less than two centimeters in one of every three patients, whereas such distance occurs in one in seven of his first-trimester patients. (Tr. 236, Test. Dr. Fitzhugh.)

Because it is difficult to gain access to ultrasound machines and additional staff in the hospitals[46] in which

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[45] The "myometrium" is the "muscular wall of the uterus." *Stedman's Medical Dictionary* 1175 (27th ed. 2000).

[46] As is required by state law, Dr. Fitzhugh performs second-trimester abortion procedures in a hospital. The state and private

Dr. Fitzhugh performs abortions, he does not generally use ultrasound during his abortion procedures. (Tr. 238, 243, 294, Test. Dr. Fitzhugh.) While Dr. Fitzhugh does not convert the fetus to a footling breech before performing an abortion, he sometimes manipulates the position of the fetus to facilitate the fetus's head passing through the patient's cervix. (Tr. 239 & 294, Test. Dr. Fitzhugh.)

Ever since Dr. Fitzhugh learned to perform the D & E method of abortion in 1975, he has intended to remove the fetus as intact as possible in each procedure because he has learned that "the quicker I got done, the easier it was and the safer it was." (Tr. 251, Test. Dr. Fitzhugh.) While Dr. Fitzhugh thinks it would be "nice" to remove intact fetuses in his abortions, he does not "expect" the fetus to deliver intact because "it doesn't happen often," and he does not "take any special steps to ensure that [the fetus] comes out intact." In order for intact removal to occur on a regular basis, Dr. Fitzhugh would have to dilate his patients with a second round of laminaria. (Tr. 276-77, Test. Dr. Fitzhugh.)

Dr. Fitzhugh does not characterize as separate and distinct the D & E procedure in which the fetus is disarticulated and the D & E procedure in which the fetus is delivered intact up to the head, followed by fetal skull compression. "I just do the same procedure all the time, and I don't categorize things. So to me, I just terminate a pregnancy." (Tr. 256, Test. Dr. Fitzhugh.)

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hospitals at which Dr. Fitzhugh practices have mortality and morbidity committees. (Tr. 303-05, Test. Dr. Fitzhugh.)

Per year, Dr. Fitzhugh estimates that one aborted fetus delivers past the vaginal opening entirely intact without further assistance from him, and two to three fetuses deliver intact up to the fetal head, which become lodged in the cervix. (Tr. 245-46, Test. Dr. Fitzhugh.) The earliest gestational age Dr. Fitzhugh has observed delivery of an intact fetus up to the head is 16 weeks. (Tr. 253, Test. Dr. Fitzhugh.)

Dr. Fitzhugh does not induce fetal demise before beginning an abortion procedure. (Tr. 254, Test. Dr. Fitzhugh.) However, Dr. Fitzhugh takes various actions during a D & E procedure that could be fatal to the fetus: separation of the umbilical cord, which occurs in 25% of his cases; disarticulation of fetal parts in the uterus; and compression of the fetal skull. (Tr. 253-54, Test. Dr. Fitzhugh.) Dr. Fitzhugh has "no idea" which one of these actions would be immediately fatal in any given case. (Tr. 253, Test. Dr. Fitzhugh.)

Dr. Fitzhugh refers patients who want to abort a live fetus beyond 22 weeks to clinics in Atlanta, New York, and Kansas. (Tr. 285, Test. Dr. Fitzhugh.)

(c) COMPRESSION OF FETAL SKULL

In the two to three cases per year in which fetuses deliver intact up to the fetal head, which becomes lodged in the cervix, Dr. Fitzhugh uses forceps to compress the fetal skull in order to reduce its size and to ensure that the fetus is dead when it is removed. (Tr. 245-47, Test. Dr. Fitzhugh ("The one thing that I want—and I don't want the staff to have to deal with is to have a fetus that you remove and have some viability to it, some movement of limbs, because it's always a difficult situation."); Tr. 294-95, Test. Dr. Fitzhugh

(some of operating room staff gasp when fetus delivers intact during D & E).)

Dr. Fitzhugh is not aware of a workable alternative to compressing the fetal skull when it becomes lodged in the cervix. He does not know whether various drugs work; he could damage the patient's cervix by cutting it; and detaching the fetal body from the head and retrieving the head from the uterus at the end of the procedure is difficult. (Tr. 247-48, Test. Dr. Fitzhugh.) Dr. Fitzhugh was once called to the operating room at the Medical College of Virginia to assist a physician who had unsuccessfully tried to medically induce labor the prior day in a patient who was miscarrying. The patient had ruptured membranes, a 103 temperature, and was "really sick." When Dr. Fitzhugh arrived in the operating room, another physician had already removed the fetus up to the head, which was lodged in the patient's cervix, and the fetus showed signs of life. Dr. Fitzhugh was required to crush the fetal skull in order to remove the fetus from the patient. (Tr. 262-63, Test. Dr. Fitzhugh.)

(d) MANNER OF PERFORMING PROCEDURES

The manner in which Dr. Fitzhugh can remove the fetus is affected by the amount of cervical dilation, the patient's response to anesthesia used to contract the uterus, the size of the patient, and the amount of sleep Dr. Fitzhugh has had. (Tr. 250-51, Test. Dr. Fitzhugh.)

iii. PLAINTIFF DR. WILLIAM H. KNORR

Dr. Knorr has performed abortions since the early 1980s. He estimates that he performed 5,000 to 6,000 abortions in 2003. Dr. Knorr performs D & Cs, medical

abortions, and D & Es, and he performs intentional intact D & Es during the second trimester in rare instances. (Tr. 500-01 & 565, Test. Dr. Knorr.)

(a) DILATION

Dr. Knorr testified that from 12 to 16 weeks, he uses a mechanical dilator to achieve enough dilation (43 Pratt[47]) to accommodate a 14-millimeter suction cannula. Between 16 and 20 weeks, Dr. Knorr administers Cytotec—a medication which softens the cervix—to his patients in the morning. Three to five hours later, Dr. Knorr uses a mechanical dilator up to 63 Pratt (2.1 centimeters) or larger, followed by the D & E procedure. (Tr. 502-03 & 535, Test. Dr. Knorr.)

As compared to laminaria, Dr. Knorr has observed several advantages to dilating with Cytotec in his 12- to 16-week patients: laminaria inserted the day prior to the procedure cause cramping and pain overnight; Cytotec significantly reduces the time of the abortion process; Cytotec both softens and dilates the cervix; and dilation with Cytotec occurs not with contractions every three to five minutes during labor, but with tetanic contractions at the level of the uterus in which the uterus contracts down, but does not relax. (Tr. 504 & 538-39, Test. Dr. Knorr.)

Dr. Knorr characterized the side effects of Cytotec as chills, fever, nausea, vomiting, and diarrhea and the side effects of laminaria as infection, hemorrhage, and uterine perforation. (Tr. 539-40, Test. Dr. Knorr.)

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[47] "Pratt" dilators are "cylindrical metal rods of graduated sizes used to dilate the cervical canal." *Stedman's Medical Dictionary* 503 (27th ed. 2000).

For his patients who are 20 weeks and beyond, Dr. Knorr pre-dilates the cervix with mechanical dilators to a size 63 Pratt, and then inserts three jumbo laminaria and three large laminaria in the patient's cervix, where they remain overnight. The following morning, the patient is given 600 milligrams of Cytotec orally, and after three to five hours, the abortion is performed. (Tr. 505, Test. Dr. Knorr.) Dr. Knorr's use of Cytotec with laminaria allows the laminaria to absorb more water and expand more freely, avoiding the "dumbelling" effect of laminaria—that is, where the expanded ends of the laminaria would be inside the internal cervical opening and outside the cervix, with a smaller diameter in the middle of the cervix. (Tr. 506, Test. Dr. Knorr.)

Dr. Knorr began using Cytotec approximately six years ago after being advised by a European doctor that Cytotec was more efficient, it caused less discomfort for the patient, and abortions up to 21 weeks could be successfully performed using Cytotec and dilation alone. Before Dr. Knorr began using Cytotec, he used laminaria to dilate his patients who were beyond 16 weeks. (Tr. 503 & 505-06, Test. Dr. Knorr.)

Typically, Dr. Knorr's patients are dilated at least four centimeters. Dr. Knorr does not believe that his methods of dilation cause cervical incompetence, a condition in which the cervix will not hold a pregnancy. (Tr. 506-07 & 516, Test. Dr. Knorr.) Dr. Knorr considers his method of dilation to be "atypical" for abortions through 24 weeks because he uses a technique that results in "greater dilation over a shorter period of time." Between 20 and 24 weeks of gestation, it generally takes Dr. Knorr approximately 24 hours to dilate the patient's cervix and remove the fetus. (Tr. 537, Test. Dr. Knorr.)

(b) REMOVAL OF FETUS

All of Dr. Knorr's second-trimester abortions are done under general anesthesia and with ultrasound guidance. Beginning at 16 weeks, Dr. Knorr places a speculum in the vagina after the patient is asleep and gently pulls forward on the cervix to straighten the cervical canal with a tenaculum or, when exceptional dilation occurs with Cytotec, with sponge forceps. The tenaculum not only straightens the cervical canal, but provides counter-traction for the mechanical dilators Dr. Knorr uses. (Tr. 508-09 & 514, Test. Dr. Knorr.)

Use of the tenaculum can shorten the distance between the vaginal opening and the outer cervix, especially as pregnancy advances and the cervix and ligaments relax in preparation for childbirth. In four to six percent of his second-trimester abortion patients, Dr. Knorr sees second-, third-, and fourth-degree descensus[48] in which the cervix is within a centimeter of the hymen at the opening of the vagina (second-degree); part of the cervix and possibly part of the uterus extend out of the vagina (third-degree); or the uterus and cervix are completely outside of the cavity in which they belong (fourth-degree). The distance between the cervix and vaginal opening is sometimes short enough that if Dr. Knorr brings the fetus out through the cervix feet-first, the fetus past the navel can be past the vaginal opening with the fetal head still in the cervix. (Tr. 509-11, Test. Dr. Knorr.)

Before removing the fetus, Dr. Knorr suctions out as much amniotic fluid as possible in order to decrease

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[48] "Descensus" means to fall away from a higher position. "Descensus uteri" means "prolapse of the uterus." *Stedman's Medical Dictionary* 483 (27th ed. 2000).

the risk of amniotic embolus. After the speculum is in the vagina and the tenaculum is on the cervix, Dr. Knorr inserts the speculum into the uterine cavity and manually extracts the fetus. Because Dr. Knorr does not convert the fetus to any particular position, he begins removing whatever fetal part presents itself first. (Tr. 513-15 & 549, Test. Dr. Knorr.) Dr. Knorr testified that the "predominant characteristic" of second-trimester D & Es is dismemberment of the fetus. (Tr. 540-41, Test. Dr. Knorr.)

If the fetal head presents itself first, Dr. Knorr applies forceps around the head and performs a "crushing technique . . . to decrease the cerebral volume so that it will pass through the cervical canal." However, in most cases, Dr. Knorr "disarticulate[s] limbs and the fetus *in utero* . . . . that is my goal. Because of the dilatation technique that I use, we gain . . . a significant amount of dilatation, and therefore I remove fewer pieces of fetal tissue than the average person doing this procedure." In his 16- to 24-week patients, Dr. Knorr removes the fetus in 10 to 20 minutes. (Tr. 514-15, Test. Dr. Knorr.)

After Dr. Knorr removes the fetus, he, with sonographic guidance, uses forceps to remove the placenta, a large sharp curette to ensure that the cavity is empty, and a suction curette to finish the procedure. (Tr. 518, Test. Dr. Knorr.) Because Dr. Knorr performs his D & E procedures under sonographic guidance for all D & Es after 12.1 weeks, he is able to see whether the patient's uterus is empty at the end of the procedure and whether uterine perforation has occurred. (Tr. 532-33, Test. Dr. Knorr.)

Because Dr. Knorr does not, except in rare cases, induce fetal demise before performing an abortion, the

majority of fetuses Dr. Knorr removes during a D & E procedure are alive. (Tr. 511, Test. Dr. Knorr.) Dr. Knorr has also had patients who are in the process of miscarrying their pregnancies and the fetus is alive in, or partly in, the uterus. (Tr. 522, Test. Dr. Knorr.)

Although not a "common occurrence," Dr. Knorr has had fetuses deliver entirely intact. Dr. Knorr delivers a fetus intact up to the fetal head that is too large to pass through the cervix approximately 10 times per year in his 20- to 24-week patients, and much less than that for his 16- to 20-week patients. These instances are related to the amount of dilation Dr. Knorr has been able to accomplish. (Tr. 515-16 & 573-75, Test. Dr. Knorr.) Before each abortion procedure, Dr. Knorr expects that, most likely, the fetus will be removed in large parts, but realizes that intact removal of a fetus can, and does, happen because of his dilation technique. (Tr. 517, Test. Dr. Knorr.)

Dr. Knorr has attempted, albeit rarely, to remove fetuses intact in the second trimester upon a referring physician's request so that anatomical studies on a malformed fetus can be performed or so pictures of the fetus can be taken for teaching purposes. Dr. Knorr also attempts intact removal of second-trimester fetuses upon a patient's request. When Dr. Knorr is attempting to remove a second-trimester fetus intact, he must achieve greater dilation than would be necessary to perform a dismemberment D & E. (Tr. 541-43 & 558, Test. Dr. Knorr.)

Dr. Knorr does not perform second-trimester induction abortions because he does not "really have the ability to do that. I cannot put a woman in the hospital where I have privileges and admit her for an

elective abortion beyond 12 weeks[49] of gestation, and even if I wanted to do 12 weeks and under, I can usually never find a nurse that will accompany me to the [operating room] to do it." (Tr. 519-20, Test. Dr. Knorr.)

(c) COMPRESSION OF FETAL SKULL

In "almost all of [Dr. Knorr's] cases, the [fetus's] head gets stuck" during removal of the fetus. (Tr. 538, Test. Dr. Knorr.) As mentioned above, if the fetal head presents itself first, Dr. Knorr applies forceps around the head and performs a "crushing technique . . . to decrease the cerebral volume so that it will pass through the cervical canal." (Tr. 514, Test. Dr. Knorr.) If the fetus has come through the cervix except for the head, Dr. Knorr proceeds as follows:

> I first evaluate the cervix to see if I have enough room to slip a finger between the cervix and the fetal head, and if I can do that, I can then insert my crushing forcep around the head, crush the head and extract it. If the cervix is very tight, I can't do that, I will use a craniotomy procedure, will turn the fetus so the back is up and find the area that I want to open, and either with a finger, a dilator or a scissor will open that area and gently pull down. That pressure alone is enough to empty the cranium and extract the head.

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[49] Shortly after Dr. Knorr "came on board" at the hospital, the hospital's bylaws changed the 20-week limit to 12 weeks. (Tr. 520, Test. Dr. Knorr.) Dr. Knorr does not have privileges at the Manhattan-area hospital that allows abortions up to 24 weeks. (Tr. 568-69, Test. Dr. Knorr.)

(Tr. 516, Test. Dr. Knorr.) Dr. Knorr has never used a suction cannula with the above-described procedure. (Tr. 516-17, Test. Dr. Knorr.) When the fetus comes through the patient's cervix except for the head, the fetus could be alive prior to Dr. Knorr's compression or puncturing of the skull. (Tr. 518, Test. Dr. Knorr.) These living fetuses are "grossly obtunded, meaning that they have a lack of oxygen due to the tetanic contraction. They have some oxygen, there will be a fetal heartbeat, but they are generally limp." (Tr. 558, Test. Dr. Knorr.)

Dr. Knorr would rather not remove a fetus completely intact—that is, without collapsing the fetal skull—because he is attempting to perform "an abortion procedure and not a live delivery" and because "that head coming through the cervix without collapsing it first will cause damage to the cervix. It is the largest diameter you're removing from the uterine cavity." (Tr. 544-46, Test. Dr. Knorr.)

Dr. Knorr does not wait to see if the fetal head will eventually pass through the cervix on its own because his patients are under general anesthesia and are not intubated[50] during this procedure, and "adding dose upon dose of this [anesthesia] medication would eventually become toxic." (Tr. 517, Test. Dr. Knorr.)

The earliest gestation at which Dr. Knorr has observed a fetus coming out intact except for the head, which remains inside the patient's cervix, is 16 weeks. (Tr. 518, Test. Dr. Knorr.)

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[50] "Intubation" is "[i]nsertion of a tubular device into a canal, hollow organ, or cavity; specifically, passage of an oro- or nasotracheal tube for anesthesia or for control of pulmonary ventilation." *Stedman's Medical Dictionary* 918 (27th ed. 2000).

Dr. Knorr does not view an abortion procedure in which he able to remove the fetus intact but for the head as a separate, distinct procedure from a D & E where he must dismember the fetus in order to remove it. (Tr. 519, Test. Dr. Knorr.) Dr. Knorr's medical charts do not note whether a fetus is removed intact but for the head or in pieces because it is not medically relevant in his opinion. (Tr. 570, Test. Dr. Knorr.)

(d) MANNER OF PERFORMING PROCEDURES

Dr. Knorr would consider a "delivery" to include the situation in which the fetus is in a vertex position and the fetal head comes outside the body of the mother. In such a case, Dr. Knorr would not deem it appropriate to kill the fetus and he would "do everything in [his] power to keep that fetus alive if it is resuscitatable." (Tr. 555-56, Test. Dr. Knorr.)

iv. PLAINTIFF DR. JILL L. VIBHAKAR

Dr. Vibhakar performs medical abortions, suction procedures, D & Es, and induction terminations. Dr. Vibhakar performs D & Es up to 23 weeks and up to 24 weeks to save the life or health of the mother. (Tr. 314 & 362, Test. Dr. Vibhakar.)

Dr. Vibhakar performs abortions at the Emma Goldman Clinic, an independent, nonprofit facility, and the University of Iowa Hospital and Clinic. The University of Iowa discourages elective abortions at its facility, but will allow patients who do not fit within the admission criteria at the Emma Goldman Clinic or Planned Parenthood to obtain an abortion there. This includes patients who have severe cardiac disease, uncontrolled

diabetes, uncontrolled seizure disorders, uncontrolled asthma, and large uterine fibroids, among other conditions. (Tr. 400-09, Test. Dr. Vibhakar.)

(a) DILATION

Dr. Vibhakar testified that for her patients with 13- and 14-week pregnancies, she uses misoprostol bucally (in the cheeks or oral cavity without swallowing) the morning of the procedure. At 15 to 16 weeks, she inserts one set of laminaria the day prior to the D & E, and at 17 weeks, two sets of laminaria are used. The number of laminaria contained in each set varies with each patient. (Tr. 331-35, Test. Dr. Vibhakar.) For her laminaria patients, Dr. Vibhakar will also administer misoprostol the morning of the procedure. (Tr. 329-30, Test. Dr. Vibhakar.)

At 13 to 14 weeks, Dr. Vibhakar attempts to achieve 12 to 14 millimeters of dilation; at 15 and 16 weeks, she attempts to dilate to 15 or 16 millimeters (1 1/2 centimeters); and at 17 weeks, Dr. Vibhakar prefers to dilate from 2 to 4 centimeters. Dr. Vibhakar uses metal dilators if adequate dilation is not achieved by use of misoprostol and/or laminaria. (Tr. 330-33, Test. Dr. Vibhakar.) Dr. Vibhakar does not use a third round of laminaria when adequate dilation has not been achieved because it makes the procedure more expensive and burdensome for her patients who do not live in the area, and an additional day of laminaria does not "gain[ ] that much more medically." (Tr. 334-35, Test. Dr. Vibhakar.)

Larger dilation makes Dr. Vibhakar's abortion procedures faster, safer, easier to perform, and less uncomfortable for the patient. Dr. Vibhakar believes that increased dilation results in less blood loss and reduces the chance of having to remove the fetus in small pieces

which can increase the chance of cervical injury and uterine perforation. (Tr. 333-34 & 345, Test. Dr. Vibhakar.) If enough dilation is achieved so that Dr. Vibhakar can remove the fetus "predominantly intact up to the level of the calvarium . . . that procedure then just involves . . . one or two passes into the uterus, no small fragments. It's faster, shorter, it's less uncomfortable to the patient, and there is less chance of uterine injury." (Tr. 397-98, Test. Dr. Vibhakar.)

(b) REMOVAL OF FETUS

The length and position of a woman's vagina, location of the cervix, a patient's parity, and gestational age affect the distance between the cervix and vaginal opening after Dr. Vibhakar uses a tenaculum to straighten the cervix. It is "[n]ot very common" for the cervix to be at the vaginal opening; whereas the distance between the cervix and the vaginal opening is four centimeters approximately 10% of the time. (Tr. 336-38, Test. Dr. Vibhakar.)

Dr. Vibhakar first uses a suction cannula to evacuate the amniotic fluid from the uterus and to bring the products of conception closer to the cervix. (Tr. 338, Test. Dr. Vibhakar.) Dr. Vibhakar does not manipulate the fetus into a certain position before beginning the extraction procedure with the forceps. (Tr. 375, Test. Dr. Vibhakar.) She uses forceps to remove as much pregnancy tissue as possible at one time. To facilitate removing large pieces of the fetus, Dr. Vibhakar grasps fetal parts that start coming through the cervix, and then regrasps or twists those parts at a higher level in the cervix or uterus, rather than continuing to pull on the part such that it disarticulates. When a part of the fetus is too large to fit through the cervix, it separates

from the rest of the fetus's body, causing "multiple passes" to be made to remove the entire fetus. Larger pieces of the fetus may be extracted when a greater degree of dilation occurs before the procedure begins. (Tr. 338-41, Test. Dr. Vibhakar.)

Dr. Vibhakar uses suction—and sometimes a sharp or blank curette—to remove remaining pieces of tissue after the large parts of the fetus are removed. If she is unsure whether she has retrieved all the major parts of the fetus during the procedure, Dr. Vibhakar uses ultrasound to check for retained tissue and physically checks the fetal tissue that has been removed during the procedure to be sure she has an adequate amount. (Tr. 376-77, Test. Dr. Vibhakar.)

While she learned to perform a procedure similar to what ACOG has described as an intact D & X in her residency training, Dr. Vibhakar does not perform that procedure because she typically does not get the amount of dilation necessary to perform the procedure and she is now more experienced at doing dismemberment D & Es. When Dr. Vibhakar begins a D & E, she cannot predict whether it will come out largely intact or in pieces. (Tr. 343-46, Test. Dr. Vibhakar.) Dr. Vibhakar testified that 100% of her second-trimester D & E procedures involve fetal dismemberment. (Tr. 362, Test. Dr. Vibhakar.)

Before Dr. Vibhakar begins a second-trimester D & E, the fetus is likely alive, as documented by an ultrasound performed either a day or a few weeks before the procedure. Dr. Vibhakar does not know when fetal demise occurs during her procedures, nor is there any clinical significance to when demise occurs in her opinion. (Tr. 346, Test. Dr. Vibhakar.)

(c) COMPRESSION OF FETAL SKULL

Dr. Vibhakar has had two cases at 18 or 19 and 21 weeks where the fetus has delivered intact up to the head, after which she disarticulated the body from the head, used forceps to compress the fetal head, and extracted the head. In the 18- or 19-week case, the patient had been dilated with two sets of laminaria, and both laminaria and misprostol were used in the 21-week case. (Tr. 341-42 & 381- 83, Test. Dr. Vibhakar.)

Whether the fetus delivers intact up to the fetal head, or whether Dr. Vibhakar has disarticulated the fetus in some fashion in the course of removing the fetus, she must compress the head in some fashion in order to fit through the cervix. Such compression can create skull fragments that can cause lacerations. (Tr. 383-84 & 399, Test. Dr. Vibhakar ("Can't think of a time when it's come out without being compressed.").)

(d) INDUCTION

Dr. Vibhakar estimates that of all second-trimester abortion procedures performed in the United States, only five percent are induction abortions. Dr. Vibhakar provides induction abortions because after counseling regarding the risks and benefits of induction compared with D & E, some patients opt to have an induction. There are other patients who are carrying a fetus with an anomaly who wish to have an induction termination resulting in an intact fetus so photographs may be taken to assist in the grieving process. (Tr. 325-26, Test. Dr. Vibhakar.)

In cases where neither a D & E nor an induction termination is contraindicated for an abortion patient, deciding which procedure will be performed is a matter of informed consent for the patient and a matter of staff

and facility availability. For example, Dr. Vibhakar does not offer induction abortions at the clinic where she works on a monthly basis because it does not have a facility and staff available 24 hours a day. (Tr. 391-92, Test. Dr. Vibhakar.)

v. DR. DOE

The identity and curriculum vitae of Dr. Doe are subject to a protective order and are sealed. Suffice it to state that Dr. Doe has been practicing medicine for over 40 years, is board-certified in the United States and other countries, is a member of ACOG, has practiced medicine in major metropolitan hospitals, and is currently a clinical associate professor at a medical school and director of a women's clinic in a major metropolitan area. In 2003, Dr. Doe performed 1,130 abortions, of which 280 were second-trimester abortions for maternal indications, 92 were second-trimester abortions for fetal anomalies, and the remainder were first-trimester procedures. Dr. Doe performed approximately 950 abortions in both 2001 and 2002.

(a) DILATION

Dr. Doe testified that from 13 through 15 weeks, he or she uses laminaria to dilate the patient's cervix the day prior to performing the termination procedure. Beginning at 16 weeks, Dr. Doe dilates the patient's cervix over two days. The first day, Dr. Doe inserts one or two Dilapan, a synthetic osmotic dilator, into the cervix, along with a gauze sponge in the vagina to keep the Dilapan in place, after which the patient leaves the clinic to resume normal activities, with some minor restrictions. The dilation process causes severe discomfort in some women, and no discomfort whatsoever in others. (Tr. 37-39, Test. Dr. Doe.)

Dr. Doe attempts to get a "generous dilatation" before performing a D & E procedure. At 16 weeks, Dr. Doe strives for 1 1/2 to 2 centimeters of dilation for maternal indications and 3 centimeters for fetal indications; at 18 weeks, 3 to 4 centimeters of dilation for maternal indications and 4 to 5 centimeters for fetal indications; and at 20 weeks, 4 to 5 centimeters for maternal indications, with 5 being the goal for fetal indications. (Tr. 41-42, Test. Dr. Doe.) In fetal-indication cases in which Dr. Doe seeks to achieve more generous dilation in order to obtain an intact fetus, he or she uses more laminaria-up to 25 Dilapan in the second insertion-sometimes over the course of three days. (Tr. 50, Test. Dr. Doe.)

Dr. Doe uses misoprostol in maternal-indication cases where additional softening and dilation of the cervix are needed because Dr. Doe has been unable to insert as many laminaria or Dilapan as he or she wishes. (Tr. 139-40, Test. Dr. Doe.)

(b) REMOVAL OF FETUS

In the first trimester of Dr. Doe's patients' pregnancies, Dr. Doe uses the suction curettage and manual vacuum aspiration methods of abortion. He or she performs these methods by administering intravenous sedation and analgesia; examining the abdominal area manually and by ultrasound to measure the size, shape, and position of the uterus and size of the fetus; inserting a speculum into the vagina and administering local anesthesia to the anterior lip of the cervix; grasping the anterior lip of the cervix with a tenaculum to hold it steady while he or she injects more local anesthetic; dilating the cervix according to the size of the fetus with long, slim, metal rods ("metal dilators");

inserting a suction cannula into the uterus; using either electrical suction or suction created by a 50 cc syringe to remove the uterine contents; and cleaning the uterine cavity with a curette. (Tr. 35-37, Test. Dr. Doe.)

Before performing a second-trimester abortion in cases in which fetal demise has not been induced, Dr. Doe does not know if the fetus is alive before he or she begins the abortion.[51] Further, before he or she begins the abortion, Dr. Doe does not wait for the fetus to die after he or she has ruptured the membranes, removed the amniotic fluid, or cut the cord. In such cases, Dr. Doe sometimes detects fetal movement after the fetus is outside the patient's body, but he or she takes no steps to confirm that the fetus is dead or alive because it is of "no clinical importance." (Tr. 127-29, Test. Dr. Doe.)

In his or her second-trimester D & E procedures, Dr. Doe administers pain sedation, inserts a speculum into the vagina, removes the vaginal packs and Dilapan, and grasps the anterior lip of the anesthetized cervix with a tenaculum to stabilize and manipulate the cervix so that local anesthetic can be administered and Vasopressin can be injected. According to Dr. Doe, this injection causes the uterus to contract and constricts the smaller blood vessels so the uterus is more contracted and there is less bleeding. At this point, the distance between the cervix and vaginal opening is usually three inches, but can be one inch or, infrequently, the cervix and vaginal opening can meet. The distance depends on

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[51] Dr. Doe only performs an ultrasound if he or she is seeing the patient for the first time or if the patient has not had a previous ultrasound examination. (Tr. 126-27, Test. Dr. Doe.)

the degree of relaxation of the pelvic structures and the position of the cervix. (Tr. 43-45, Test. Dr. Doe.)

Dr. Doe then removes the amniotic fluid either by rupturing the membranes or using a 14-millimeter suction curette. Dr. Doe then uses Bierer forceps to grasp and extract with a slow, rotating motion the presenting fetal part that is lowest in the uterus, trying to remove as much of the fetus as possible with each pass. (Tr. 43 & 46-48, Test. Dr. Doe.) If the fetus is in a transverse position, Dr. Doe occasionally converts the fetus to a breech position with instruments or his or her hand before attempting to remove the fetus from the patient. (Tr. 91-92, Test. Dr. Doe (procedure is called "internal podalic version").)

Dr. Doe generally removes the fetus in pieces, but approximately one to three fetuses per month come out completely intact. (Tr. 46-49, Test. Dr. Doe.) Dr. Doe does not know whether the fetus will deliver intact or dismembered when he or she starts the procedure because he or she cannot predict how much dilation will be achieved. (Tr. 83-84, Test. Dr. Doe.) Whether the fetus will deliver intact is "a function of the size of the fetus and of the degree of cervical dilatation and also of the fragility of the fetus." (Tr. 86, Test. Dr. Doe.) In 2003, Dr. Doe estimates that of the 92 abortions he or she performed for fetal anomalies in which he or she intended to remove the fetus intact, he or she successfully did so in 25 cases. Dr. Doe estimates that of the 280 second-trimester abortions performed in 2003 for maternal indications, 10 fetuses were removed intact to the fetus's head. (Tr. 130-31, Test. Dr. Doe.)

Dr. Doe stated that dismembering a fetus is more difficult after 20 weeks of gestation because the fetal

tissue is tougher and larger at that stage of development. (Tr. 87, Test. Dr. Doe.)

When attempting to remove a fetus intact because of fetal indications, Dr. Doe performs the abortion in a hospital under general anesthesia. Using a procedure similar to that described above, Dr. Doe uses Bierer forceps to grasp a foot, which aligns the fetus vertically in preparation for extraction of the fetus. Dr. Doe then attempts to grasp the second foot and pulls down on both legs simultaneously, as well as the pelvis, in order to extract the fetus. (Tr. 49-52, Test. Dr. Doe.)

(c) COMPRESSION OF FETAL SKULL

When a fetus delivers intact up to the head in a maternal-indication case, and the fetal head has become lodged in the cervical opening, Dr. Doe exerts traction on the fetal body in an attempt to allow the head to pass. Depending upon the size of the head and the resistance of the cervix, Dr. Doe either continues to exert traction so that the head separates from the rest of the fetal body and is separately retrieved with forceps, or Dr. Doe places forceps around the fetal head inside the cervix and uterus and compresses the head enough "so that it will squeeze through the cervix." Dr. Doe believes the latter procedure is the easier of the two to perform. (Tr. 49, Test. Dr. Doe.)

In a fetal-indication case where Dr. Doe attempts to extract the fetus intact and the head becomes lodged in the patient's cervix, Dr. Doe tries to push the cervix up over the head in order to get the head to deliver intact. If he or she cannot dislodge the head in that manner, Dr. Doe decompresses the head by inserting scissors into the back of the fetal head and perforating the skull.

He or she makes a large enough hole to allow the fetus's brain tissue to "exude" in the patient's vaginal area as he or she exerts continued traction on the fetal shoulders and head so that the head can pass. (Tr. 53 & 93, Test. Dr. Doe.) Dr. Doe prefers to perform this skull-compression procedure, rather than let uterine contractions result in delivery, because:

> [T]he patient is under a general anesthetic at this time, and the longer the patient is under a general anesthetic, the more likely she is to develop uterine relaxation and increased bleeding. And the longer she's under a general anesthetic, the longer it will take her to recover from the general anesthetic after the procedure is finished, so under a general anesthetic, I would not delay the procedure more than a minute or two. And if the head doesn't come using the measures I described, I would decompress the head so it comes through.

(Tr. 54, Test. Dr. Doe.)

Dr. Doe characterizes the intact procedure he or she uses to abort fetuses with abnormalities as the "dilatation and extraction procedure" ("D & X") because it is "a modification of the D & E procedure . . . [and] we are trying to remove the fetus, to extract the fetus in as intact a manner as possible." (Tr. 58, Test. Dr. Doe.) Dr. Doe began performing the D & X procedure in the late 1980s or early 1990s. (Tr. 64, Test. Dr. Doe.) Dr. Doe began attempting to extract fetuses in a more intact manner in approximately 2000 when he or she began seeing more patients carrying fetuses with anomalies. (Tr. 64-65, Test. Dr. Doe.)

In the hypothetical case of a 17-week maternal-indication patient, Dr. Doe would prefer to deliver the

fetus intact, as opposed to piecemeal, because "it comes out in one piece, and you know you've completed a procedure, and it's just a matter of removing the placenta and then it's over." (Tr. 152, Test. Dr. Doe.)

Dr. Doe has not published a review of his or her D & X procedures so independent review could occur, nor does Dr. Doe routinely follow up with his or her patients after a midtrimester abortion and two-day dilation process. (Tr. 94-95, Test. Dr. Doe.)

vi. DR. STEPHEN T. CHASEN

Dr. Chasen is a board-certified physician in obstetrics and gynecology and maternal-fetal medicine, a member of ACOG, and a fellow of the Society for Maternal-Fetal Medicine.[52] Dr. Chasen has an active patient-care practice, supervises an antepartum inpatient service, and directs the High-Risk Obstetric Clinic at the New York Weill/Cornell Medical Center. He is a member of that care facility's Obstetric Patient Safety Committee and the Obstetric and Gynecology Quality Assurance Committee. Dr. Chasen is an associate professor of obstetrics and gynecology at the Weill Medical College of Cornell University, with 80% of his teaching performed in a clinical setting. His clinical instruction includes teaching surgical abortion methods, including the D &

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[52] Maternal-fetal medicine is a subspecialty of obstetrics and gynecology that endeavors to have healthy mothers deliver healthy babies. The maternal aspect of this subspecialty focuses on medical complications experienced by the mother during pregnancy, whether those problems arise due to the mother's underlying and pre-existing medical condition or as a pregnancy-related medical complication. The fetal aspect of maternal-fetal medicine assesses the fetus's health and identifies fetuses that may benefit from therapy or by a timed delivery. (Ex. 121, Test. Dr. Chasen 1545-47.)

E and intact D & E procedures. He is involved in clinical research involving antepartum care, obstetric complications, and prenatal diagnosis and has written or co-authored over 20 peer-reviewed and published articles. (Ex. 121, Test. Dr. Chasen 1540-44, 1547-50, 1555-57.)

(a) ABORTION TRAINING AND EXPERIENCE

Dr. Chasen received training to perform first-trimester D & Cs during his residency between 1992 and 1996. He was trained to perform second-trimester D & Es during his fellowship at the New York Hospital beginning in 1996. (Ex. 121, Test. Dr. Chasen 1553-54.)

Over the course of his career, Dr. Chasen has performed 200 to 300 D & Cs, 200 to 300 D & Es, and 50 to 75 intact D & Es. He estimates he has supervised 50 second-trimester abortions over the past year. (Ex. 121, Test. Dr. Chasen 1551-52 & 1555.) The D & E is the only method of second- trimester abortion Dr. Chasen has performed over the last year. (Ex. 121, Test. Dr. Chasen 1553.) Dr. Chasen performs D & Cs before 14 weeks and D & Es from 13 to 23 weeks and six days, and possibly later in cases of fetal demise. (Ex. 121, Test. Dr. Chasen 1552-53.)

(b) DISMEMBERMENT AND INTACT D & E COMPARED

Dr. Chasen views the dismemberment version of the D & E and the intact D & E as variations of the D & E procedure. Dr. Chasen believes both are dilation and evacuation procedures in which the cervix is in most cases deliberately dilated and the fetus and placenta are removed; however, one involves dismemberment of the

fetus with forceps, while the other is accomplished by a breech extraction. (Ex. 121, Test. Dr. Chasen 1560-61).

To perform a D & E, Dr. Chasen first provides the patient with a detailed informed consent. Dr. Chasen advises his patients that the D & E presents a small risk (1%) of hemorrhage, a very small risk of uterine perforation (less than 1%), and a small risk (5%) of infection. He then inserts laminaria into the patient's cervix and administers prophylactic antibiotics. (Ex. 121, Test. Dr. Chasen 1681-82.)

Dr. Chasen strives for the maximum cervical dilation that can be obtained. Depending on the gestational size and fetal age, Dr. Chasen inserts laminaria one or two days before the D & E surgical procedure. At 20 weeks or greater, he generally inserts laminaria for two consecutive days. The day after the last insertion of laminaria, the patient comes to the operating room, receives anesthesia, is placed in stirrups, the laminaria are removed, and the patient receives a sterile wash and drape. Once the patient is under anesthesia, Dr. Chasen examines the dilation of the cervix and, based on the proximity of the cervix to the vagina and the position of the fetus as determined by palpation or ultrasound, determines the most appropriate way to evacuate the fetus from the uterus. (Ex. 121, Test. Dr. Chasen 1571-72, 1635, 1673.)

Dr. Chasen stated that the two methods of performing a D & E both involve the use of forceps. In most cases, he dismembers or disarticulates the fetus. However, the fetus may come out intact to the level of the head. If this occurs, Dr. Chasen performs an intact D & E. Dr. Chasen delivers a breech-presentation fetus intact to the level of the umbilicus or higher, and when the head reaches the cervical os, he uses forceps to

make an incision at the base of the skull. Dr. Chasen aspirates the skull contents by suction, thereby collapsing the fetal head, and he then delivers the fetus intact. In some cases, Dr. Chasen aborts the fetus intact without the use of forceps or collapsing the skull. (Ex. 121, Test. Dr. Chasen 1572-73, 1597, 1675.)

When an intact D & E is feasible, Dr. Chasen performs the procedure much like a breech delivery after viability, with the exception of decompressing the fetal skull. One leg is delivered and when it is almost out, the second leg is swept out. Dr. Chasen wraps a small sterile towel around the fetus and pulls the legs out to the sacrum (lower portion of the spine). When the fetus is out to the level of the umbilicus, Dr. Chasen wraps a second towel around the first small towel and pulls the fetus down to the level of the shoulder blades. With his hands on the fetus's back, Dr. Chasen twists the fetus to rotate the shoulder and the arm in front is swept out. Dr. Chasen then rotates the fetus to the other side, sweeping the other arm out. At that point, the head is at the cervical os and Dr. Chasen must decide if the head can be delivered without suctioning. If lowering the chin will permit the fetal head to be removed, Dr. Chasen does so, places the removed fetus on a table, and then delivers the placenta. If the head cannot be removed by lowering the chin, Dr. Chasen uses a clamp to grasp the cervix and elevate it. As a surgical assistant pulls the fetus's legs, Dr. Chasen visually and by palpation locates the base of the fetal skull, punctures the skull with scissors, and suctions out the contents. Dr. Chasen removes the fetal head and suction cannula simultaneously. (Ex. 121, Test. Dr. Chasen 1674-78.)

With a vertex (head-first) presentation, when the fetal skull is flush against the internal cervical os, Dr. Chasen uses suction on the skull and then delivers the fetus. (Ex. 121, Test. Dr. Chasen 1678-79.)

Since Dr. Chasen believes that the intact D & E is safer than the dismemberment D & E, Dr. Chasen's goal is to perform an intact D & E every time. However, the ultimate choice between the two methods of D & E depends on the degree of cervical dilation, the proximity of the cervix to the vagina, and the position of the fetus by palpation or ultrasound. Dr. Chasen makes a general determination of which method will be used when he first examines the extent of cervical dilation. In some cases the doctor believes at the outset that disarticulation will be required, but in the first pass he grasps a fetal leg and continues to attempt an intact D & E by breech extraction. (Ex. 121, Test. Dr. Chasen 1572-74 & 1612.)

Dr. Chasen testified that an intact D & E by breech extraction is typically more likely after 20 weeks of gestation because it is easier to achieve a higher degree of cervical dilation and the fetus is less likely to be dismembered or torn apart by manual traction. Intact delivery may be possible before 20 weeks when Dr. Chasen obtains advanced degrees of cervical dilation. (Ex. 121, Test. Dr. Chasen 1574-75 & 1675.) Dr. Chasen estimates that fetuses deliver intact up to their head approximately 12 times per year. (Ex. 121, Test. Dr. Chasen 1655.)

According to Dr. Chasen, the distance between the vaginal opening and the cervical os is usually eight to ten centimeters. However, a history of prior vaginal deliveries or the administration of general anesthesia at the time of the surgical abortion relaxes the pelvic

muscles. In such circumstances, Dr. Chasen has observed that the cervix may be at or within one or two centimeters of the level of the vaginal opening, and during the D & E procedure, parts of the fetus may be in the cervix and uterus while other parts of the fetus may be in the vaginal opening. (Ex. 121, Test. Dr. Chasen 1575-77.)

Dr. Chasen's goal in performing D & Es is to remove the fetus as intact as possible to minimize the risk of trauma to the maternal tissues, including the uterus and cervix. (Ex. 121, Test. Dr. Chasen 1561.) For Dr. Chasen, the method of abortion chosen is not dependent on the medical condition that requires termination of the pregnancy. Rather, he attempts an intact D & E in all second- trimester abortions. (Ex. 121, Test. Dr. Chasen 1683-85.)

vii. DR. FREDRIK FRANCOIS BROEKHUIZEN

Dr. Broekhuizen is a board-certified physician in obstetrics and gynecology. Twenty percent of his professional employment is committed to international health consulting and teaching in maternal and neonatal health and cervical cancer prevention. The remainder of his professional time is spent at the Medical College of Wisconsin in Milwaukee, Wisconsin, where he is a professor and maintains a clinical practice in general obstetrics and gynecology, which includes working in the division of internal fetal medicine managing high-risk obstetrical care, ultrasound, and prenatal diagnosis. Thirty percent of his medical school employment is devoted to being the medical director for Planned Parenthood of Wisconsin. Dr. Broekhuizen was a plaintiff in a suit challenging Wisconsin's partial-

birth abortion act. Dr. Broekhuizen has extensive experience in performing abortions for maternal- and fetal-health reasons. (Ex. 120, Test. Dr. Broekhuizen 482-84, 488-89, 493.)

Dr. Broekhuizen performs D & Cs, second-trimester D & Es up to 20 weeks, and second-trimester inductions up to 24 weeks, the legal limit in Wisconsin. (Ex. 120, Test. Dr. Broekhuizen 490.) D & Es have been a "regular" part of Dr. Broekhuizen's practice for the past 20 years, having performed a total of 400 to 500 over his career, with 90 to 95% of those involving dismemberment. (Ex. 120, Test. Dr. Broekhuizen 491 & 571.) Dr. Broekhuizen also considers induction abortions to be a "regular" part of his practice for the past 20 years. Although the total number of induction abortions performed by Dr. Broekhuizen is unknown, he estimates that he has completed more labor inductions than D & Es. (Ex. 120, Test. Dr. Broekhuizen 491 & 579.)

(a) D & E

Dr. Broekhuizen's objective in performing an abortion procedure is to evacuate the contents of the uterus with the least possible trauma to the mother in the shortest period of time. A shortened time period avoids prolonged bleeding. Dr. Broekhuizen attempts to lessen trauma by using laminaria and misoprostol to obtain sufficient dilation so that instruments can pass through the cervix without causing damage and to keep the number of instrument passes at a minimum. He may also administer oxytocin to promote uterine contractions as needed. (Ex. 120, Test. Dr. Broekhuizen 518-19.)

Up to 18 weeks of gestation, Dr. Broekhuizen uses only misoprostol to promote cervical dilation. After 18 weeks, he uses a combination of misoprostol and laminaria. (Ex. 120, Test. Dr. Broekhuizen 510.) The number of laminaria Dr. Broekhuizen uses is determined by how many can safely be placed into the woman's cervix. Dr. Broekhuizen has inserted as many as 20 to 25 dilators into a woman's cervix at one time. (Ex. 120, Test. Dr. Broekhuizen 511 & 615.) Dr. Broekhuizen only uses serial dilation with laminaria when he intends at the outset of the procedure, for medical reasons, to deliver the fetus intact up to the head. (Ex. 120, Test. Dr. Broekhuizen 588-89.)

Dr. Broekhuizen administers misoprostol vaginally to soften and dilate the cervix and prompt uterine activity. He believes that using misoprostol avoids use of mechanical dilators and promotes sufficient cervical dilation to permit a D & E without numerous instrument passes. However, Dr. Broekhuizen cannot predict the extent of misoprostol's effect on a particular woman. (Ex. 120, Test. Dr. Broekhuizen 511-13.) For a 22-week D & E, Dr. Broekhuizen attempts to achieve three to four centimeters of dilation. (Ex. 120, Test. Dr. Broekhuizen 544.)

Since his objective is to evacuate the uterus in the simplest and safest way possible, if sufficient dilation exists, Dr. Broekhuizen removes the fetus up to the head. (Ex. 120, Test. Dr. Broekhuizen 582.) The amount of cervical dilation influences whether Dr. Broekhuizen delivers the fetus intact, but a prediction on whether intact delivery may be accomplished cannot occur until Dr. Broekhuizen removes the laminaria and evaluates the extent of the woman's response to the misoprostol and laminaria. For maternal-care reasons, Dr.

Broekhuizen will not dismember the fetus and expose the woman to multiple passes through the cervix and other risks of a dismemberment D & E if the extent of dilation accomplished permits an intact D & E. (Ex. 120, Test. Dr. Broekhuizen 522.)

Dr. Broekhuizen testified that the distance between the vaginal opening and the cervical os varies depending on the patient. In the D & E procedure, Dr. Broekhuizen places a clamp on the anterior or posterior lip of the cervix and pulls the clamp to straighten the cervix. Depending on the woman, the cervix may come to the level of the vaginal opening and, on rare occasions, may be pulled out of the vaginal opening. (Ex. 120, Test. Dr. Broekhuizen 514-15.)

Dr. Broekhuizen uses forceps in his D & Es as a grabbing instrument with serrated surfaces that can crush and hold onto tissue. He uses forceps to pull the fetus, sometimes in combination with a twisting motion, out of the uterus through the cervix. (Ex. 120, Test. Dr. Broekhuizen 519-20 & 569-70.)

Dr. Broekhuizen's second-trimester D & Es normally involve removing the fetuses in parts. (Ex. 120, Test. Dr. Broekhuizen 566-67.) In a D & E procedure, Dr. Broekhuizen testified that disarticulation can occur in the vagina and, depending on the distance between the cervix and the vaginal introitus, part of the extremity may be outside the woman's body when disarticulation occurs. (Ex. 120, Test. Dr. Broekhuizen 520-21.)

Dr. Broekhuizen stated that in a D & E procedure, a doctor may accomplish pulling a living fetus through the cervix intact to a point where the fetal umbilicus is outside the vaginal opening and the fetal head is lodged at the internal cervical os. He testified that this can

happen as early as 12 to 13 weeks of gestation and is more common with the use of misoprostol. Dr. Broekhuizen observed that disarticulation can occur in the vagina and, depending on the distance between the cervix and the vaginal opening, part of the extremity may be outside the woman's body when disarticulation occurs. (Ex. 120, Test. Dr. Broekhuizen 521.)

Dr. Broekhuizen testified that if the fetal head is lodged at the cervical os, compression or decompression of the head may be accomplished by crushing the skull, or sometimes traction at the base of the skull will release the brain fluids. Dr. Broekhuizen may use a trocar if the fetal head is enlarged due to a fetal anomaly. (Ex. 120, Test. Dr. Broekhuizen 523-24.) Once the fetal contents are removed, Dr. Broekhuizen uses suction and a sharp curette to remove the placenta, as retained placenta or fetal parts may cause infection and bleeding. (Ex. 120, Test. Dr. Broekhuizen 525-26.)

After 18 weeks of gestation, Dr. Broekhuizen uses ultrasound to perform D & Es. Prior to 18 weeks, he uses ultrasound if, due to the lack of cervical dilation with laminaria or other observations made during his examination, he believes the fetus will be dismembered in the D & E procedure and he anticipates problems identifying whether all the parts have been removed. (Ex. 120, Test. Dr. Broekhuizen 515.)

Dr. Broekhuizen does not intentionally convert the fetus to a breech position before its removal, but believes his method of performing the D & E may result in a conversion. Before he begins the D & E procedure, he uses a large suction curette to remove the amniotic fluid, and sometimes parts of the placenta will also be removed in that process. He then introduces an instrument to grab and pull on a fetal

part, the effect of which may be conversion of the fetus to a breech position. (Ex. 120, Test. Dr. Broekhuizen 516 & 566.) In Dr. Broekhuizen's experience, at least one-half of second-trimester fetuses will, without conversion, be in the uterus in a breech position. (Ex. 120, Test. Dr. Broekhuizen 516.)

A D & E usually takes Dr. Broekhuizen 15 to 20 minutes to complete, but it can take as little as 5 and as many as 40 minutes. (Ex. 120, Test. Dr. Broekhuizen 524.)

In Dr. Broekhuizen's opinion, the only fundamental difference between a dismemberment D & E and an intact D & E is that larger cervical dilation is attempted for intact D & Es. (Ex. 120, Test. Dr. Broekhuizen 544.) Dr. Broekhuizen testified that while an intact D & E is preferred over disarticulation to avoid multiple passes, bony fragments, and resulting damage to the cervix, uterine wall, and bleeding, the doctor cannot always accomplish that and must accept the situation encountered. (Ex. 120, Test. Dr. Broekhuizen 520 & 611-12.)

(b) LABOR INDUCTION

Dr. Broekhuizen prefers labor induction over the D & E after 20 weeks of gestation. (Ex. 120, Test. Dr. Broekhuizen 578.)

Dr. Broekhuizen described medical induction as an inpatient procedure performed in the hospital that takes as little as eight hours and as long as three days. Dr. Broekhuizen begins this procedure by starting the woman on an IV and placing misoprostol in her vagina every four to six hours to induce labor. The medication used for a labor-induction abortion is more potent than what is administered to induce delivery at term because

the medicine must override the body's natural mechanisms for retaining the fetus to term. Cramping and labor pain that may be stronger than that experienced at a term delivery occur because the body has not produced natural pain suppressants in preparation for a term delivery. Dr. Broekhuizen offers the patient an epidural, IV. morphine, dilaudid, or demerol for pain relief.

A surgical evacuation by D & E may be necessary if complications, especially infection, arise. After Dr. Broekhuizen delivers the fetus, he administers high doses of oxytocin to deliver the placenta. Dr. Broekhuizen will wait up to four hours for the placenta to deliver, but in 20 to 30% of his second-trimester labor-induction abortions, he must perform a D & C-type procedure (instrumental removal) to deliver the placenta, either because delivery was not occurring or because the woman began bleeding. (Ex. 120, Test. Dr. Broekhuizen 526-31 & 580.)

Dr. Broekhuizen testified that six to seven centimeters of cervical dilation would be sufficient for delivery of a 22-week fetus by labor induction, whereas ten centimeters of dilation is required at term. (Ex. 120, Test. Dr. Broekhuizen 544-45.)

viii. DR. MARILYNN FREDERIKSEN

Dr. Frederiksen is a 1974 graduate of Boston University Medical School. She completed her pediatrics residency program at the University of Maryland in 1976 and her obstetrics and gynecology residency program at Harvard University in 1979. She has also completed fellowship programs at Northwestern University in maternal-fetal medicine in 1981 and clinical

pharmacology in 1983. She is a member of ACOG, the American Society of Clinical Pharmacology and Therapeutics, and the Society for Maternal Fetal Medicine. Dr. Frederiksen is board-certified in obstetrics and gynecology, maternal-fetal medicine, and clinical pharmacology. For the past two and one-half years, she has been a private practitioner for Northwestern Perinatal Associates in Chicago, Illinois, specializing in general obstetrics and gynecological care of high-risk pregnancies, prenatal diagnosis, and pregnancy terminations by medical induction, D & E, and intact D & E. Prior to her current position, she maintained a similar full-time practice and faculty position at Northwestern University Medical School. In her full-time faculty position, she managed that institution's abortion services and supervised resident education in abortion practices. She has taught at Northwestern University since 1981 and remains a clinical associate professor of obstetrics and gynecology, providing lectures on pathology in pregnancy, contraception, abortion, and antenatal care of the pregnant patient. She has been a member of Northwestern University's Institutional Review Board for the last 12 years. (Ex. 123, Test. Dr. Frederiksen 1037-42, 1046 & Sub-Ex. 123A).

Dr. Frederiksen was a plaintiff who challenged the Illinois partial-birth abortion act, and was an expert witness in cases challenging Colorado's and Idaho's parental-notification statutes. She has been described as "a critical medical expert in many of the ACLU's challenges to anti-choice legislation," and, along with Dr. Carhart, serves on the board of directors of Physicians for Reproductive Choice and Health. (Ex. 123, Test. Dr. Frederiksen 1165-68.)

Dr. Frederiksen has performed D & C, D & E, intact D & E, and medical-induction abortion procedures. She has performed thousands of D & Es over the course of her career, approximately 100 to 125 procedures per year. The latest gestational age at which Dr. Frederiksen has performed elective abortions is 23 and 5/7 weeks, but she has performed induction abortions at 20 to 24 weeks. She provides induction abortions after 24 weeks only for lethal fetal anomalies. (Ex. 123, Test. Dr. Frederiksen 1043-44, 1163-64, 1176, 1235.)

(a) D & E

Dr. Frederiksen characterizes the intact D & E as a variation of the D & E. (Ex. 123, Test. Dr. Frederiksen 1065.) She testified that a D & E can easily become an intact version of the D & E if the fetus can be delivered without dismemberment. (Ex. 123, Test. Dr. Frederiksen 1233-34.) Dr. Frederiksen's intent in performing a D & E is to empty the uterus quickly. Therefore, her intent at the outset of a D & E is to deliver the fetus as intact as possible. (Ex. 123, Test. Dr. Frederiksen 1234.)

Dr. Frederiksen uses the same dilation method for an intact D & E and a dismemberment D & E. (Ex. 123, Test. Dr. Frederiksen 1140.) For D & Es performed at 20 to 235/7 weeks, Dr. Frederiksen attempts to achieve as much dilation as possible and sometimes achieves 5 to 6 centimeters of dilation. (Ex. 123, Test. Dr. Frederiksen 1185 & 1187.)

Dr. Frederiksen places serial laminaria in the cervix over time to provide adequate dilation for extraction of the fetus relatively intact. (Ex. 123, Test. Dr. Frederiksen 1044-45.) For D & Es performed at 20 to 23 weeks of gestation, the cervix is dilated over a 24-

hour period. Dr. Frederiksen uses three to four sets of laminaria; the first set is inserted at 8:30 a.m., the second at noon, and the third at 5:00 or 5:30 p.m. Each time, she inserts as many laminaria as possible. Dr. Frederiksen administers vaginal misoprostol the next morning approximately three hours before the surgery. (Ex. 123, Test. Dr. Frederiksen 1185-87.)

Dr. Frederiksen does not use metal dilating rods. Dr. Frederiksen testified that forcible dilation of the cervix with an instrument is the most common cause of uterine perforation and can cause bleeding at the internal os. (Ex. 123, Test. Dr. Frederiksen 1191 & 1210-12.) Dr. Frederiksen stated that Dilapan is a synthetic osmotic dilating rod which achieved maximum cervical dilation in four hours, but it was removed from the market in the United States and is no longer used in this country. According to Dr. Frederiksen, Dilapan provided superior dilating power, but sometimes fragmented and caused a risk of infection. (Ex. 123, Test. Dr. Frederiksen 1187-89.)

Dr. Frederiksen administers paracervical blocks in the mother's cervix along with medications to provide pain relief and amnesia, but Dr. Frederiksen does not place the patient under general anesthesia. (Ex. 123, Test. Dr. Frederiksen 1075.)

In preparation for removal of the patient's uterine contents, Dr. Frederiksen places a Graves speculum in the vagina and prepares the cervix with betadine and a lidocaine injection.[53] (Ex. 123, Test. Dr. Frederiksen 1222.) Dr. Frederiksen then uses a tenaculum or ring

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[53] Lidocaine hydrochloride is a "local anesthetic with antiarrhythmic and anticonvulsant properties." *Stedman's Medical Dictionary* 996 (27th ed. 2000).

forceps to grasp the cervix, places a paracervical block, and infuses 5cc's of lidocaine. (Ex. 123, Test. Dr. Frederiksen 1222-23.)

Dr. Frederiksen then places a cannula within the patient's uterus to suction the amniotic fluid. She severs the cord if it comes down with the fluid during this suctioning. Dr. Frederiksen uses further suctioning to pull the placenta or fetal parts close to the cervix. (Ex. 123, Test. Dr. Frederiksen 1207 & 1223-24.) She then uses a Hern or Sopher forceps to grasp fetal parts and bring them through the cervix. Dr. Frederiksen testified that the forceps is not sharp and does not pose a risk of cervical laceration. (Ex. 123, Test. Dr. Frederiksen 1207, 1209-10, 1224.)

When an intact D & E is performed and the fetus presents in a breech position, Dr. Frederiksen grasps the fetal foot and carefully manipulates the fetus to deliver it to the fetal trunk until the fetal head is lodged inside the cervix. (Ex. 123, Test. Dr. Frederiksen 1225.) Dr. Frederiksen does not convert the fetus to a breech position due to the discomfort to the woman and the lack of sufficient anesthesia. Dr. Frederiksen can perform an intact D & E if the fetus is in the breech or vertex position. (Ex. 123, Test. Dr. Frederiksen 1225-26.)

Dr. Frederiksen may deliver the fetal head by using scissors to make an incision at the base of the skull and a finger to disrupt the cranial contents. Dr. Frederiksen does not use suction and does not always remove the cranial contents. Under some circumstances, Dr. Frederiksen believes it is easier to use a grasping forceps and crush the skull to compress it. (Ex. 123, Test. Dr. Frederiksen 1140-41 & 1224-25.) Dr. Frederiksen stated that the scissors is a sharp instru-

ment and potentially more dangerous to the woman than a forceps. (Ex. 123, Test. Dr. Frederiksen 1210.)

Dr. Frederiksen testified that if the fetal head becomes lodged at the internal os of the cervix, the fetal body past the level of the navel may be outside the woman's body. The traction of the ring forceps on the cervix may deliver the cervix to the level of the entrance to the vagina, and if the woman has a prolapsed uterus, the cervix can be outside the body. (Ex. 123, Test. Dr. Frederiksen 1139.)

Dr. Frederiksen then delivers the placenta by administering oxytocin intravenously to cause the uterus to contract, and by using a suction curette to assure that the uterus is empty. (Ex. 123, Test. Dr. Frederiksen 1207 & 1224.) Dr. Frederiksen stated that ultrasound can be used to determine if all the fetal tissue has been removed during a D & E, but this lengthens the procedure and is not reliable because the amniotic fluid is lost during the D & E procedure and therefore cannot provide contrast for the ultrasound. Moreover, fetal parts and blood clots sometimes have the same density and can lead to misidentification of the ultrasound image. (Ex. 123, Test. Dr. Frederiksen 1064.)

(b) LABOR INDUCTION

As part of her protocol, Dr. Frederiksen may perform labor inductions at 20 to 24 weeks. She views labor induction as a safe method of late second-trimester abortion. (Ex. 123, Test. Dr. Frederiksen 1176.)

Dr. Frederiksen performs a fetal intracardiac injection of potassium chloride the day prior to performing the induction. She uses laminaria, and sometimes serial laminaria every six hours, to soften the cervix and

misoprostol to induce contractions. (Ex. 123, Test. Dr. Frederiksen 1182-83.)

ix. DR. MITCHELL CREININ

Dr. Creinin is a physician at the University of Pittsburgh hospital and is board-certified in obstetrics and gynecology. He attended medical school at Northwestern University, and he completed a residency program in obstetrics and gynecology, a fellowship in family planning, and a fellowship in clinical research at the University of California at San Francisco in 1993. A family-planning fellowship provides specialized training in clinical care and research related to abortion and contraceptive services. There are currently 24 family-planning fellows in the nation, and Dr. Creinin was the first. The fellowship program provides training in performing abortions between 4 and 24 weeks of gestation. (Ex. 122, Test. Dr. Creinin 647-49.)

Dr. Creinin spends 40% of his professional time doing clinical research; 20% as an administrator and teacher, which includes training residents and two family-planning fellows in abortion procedures; 20% in private practice; and 20% as the medical and laboratory director of Planned Parenthood. In all these roles, he works with patients, and 90% of his practice is devoted to seeing patients and providing patient care. Dr. Creinin is also a faculty member of the University of Pittsburgh's Department of Epidemiology. (Ex. 122, Test. Dr. Creinin 648-56.)

Patients are either referred to Dr. Creinin or they contact him directly for abortion services. Due to a lack of providers, Dr. Creinin performs abortion services for patients from a geographic area extending to southern

New York, eastern Ohio, northern Virginia, and to the middle of Pennsylvania—a geographical radius of approximately a three-hour drive. Dr. Creinin performs research in contraception, abortion, ectopic pregnancy, and miscarriage, and is the author of approximately 70 publications in peer-reviewed journals and a chapter on inductions in the textbook *Gynecology and Obstetrics*. Dr. Creinin has never been a party or expert in a case challenging legislation regulating abortion. (Ex. 122, Test. Dr. Creinin 651-56.)

Dr. Creinin provides medical abortions, D & Cs, D & Es, and intact D & Es. He has not performed an induction abortion in the last 10 years. (Ex. 122, Test. Dr. Creinin 653 & 710-11.) He has performed approximately 5,000 abortions in his career, or 500 per year. In 99% or more of the D & Es Dr. Creinin has performed at 20 weeks and later, disarticulation of the fetus has resulted to some extent. He has performed three intact D & Es, as defined by ACOG, over the course of his career. (Ex. 122, Test. Dr. Creinin 731-32 & 735-36.)

Dr. Creinin performs medical abortions through 9 weeks of gestation, D & Cs through 14 to 15 weeks, and D & Es from 14 to 15 weeks through 23 and 6/7 weeks, limited to 56 millimeters biparietal diameter. (Ex. 122, Test. Dr. Creinin 650-51.) Dr. Creinin performs abortions up to 18 weeks at a Planned Parenthood clinic and at the Magee-Women's Hospital for patients at 18 weeks of gestation and beyond. (Ex. 122, Test. Dr. Creinin 650-51 & 663.)

(a) D & E

Dr. Creinin's intent in performing D & Es is to empty the uterus. (Ex. 122, Test. Dr. Creinin 681.) Dr.

Creinin's objective at the outset of the D & E is not to remove the fetus intact, but he prefers to remove the fetus as intact as possible. (Ex. 122, Test. Dr. Creinin 739 & 766.) Dr. Creinin does not attempt, at the outset, to perform an intact D & E because he believes that in his hands, a dismemberment D & E is safer than an intact D & E. (Ex. 122, Test. Dr. Creinin 744.) Dr. Creinin explains to his patients that the fetus will come out in pieces and not intact. (Ex. 122, Test. Dr. Creinin 739-40.)

Dr. Creinin testified that the D & E he performs and the intact D & E as defined by ACOG are different procedures because, among other things, the ACOG intact D & E involves multiple days of dilation. (Ex. 122, Test. Dr. Creinin 736.) Dr. Creinin stated that the intact D & E requires more cervical dilation than he generally provides. (Ex. 122, Test. Dr. Creinin 738-39.) The number of dilators Dr. Creinin administers increases as gestational age increases. (Ex. 122, Test. Dr. Creinin 734-35.)

Dr. Creinin's objective is to obtain the minimal amount of dilation necessary to perform the D & E, but the woman's response to dilators cannot be predicted. (Ex. 122, Test. Dr. Creinin 661-62.) Between 14 and 18 weeks, Dr. Creinin uses Lamicel to dilate the cervix. Dr. Creinin described Lamicel as a firm dilator which is impregnated with magnesium and softens when moistened. The magnesium activates enzymes present in the cervix to soften the cervix. Softening can occur in as little as 2 hours and as much as 24 hours, depending on the gestational age of the fetus, the history of the patient, and other factors. (Ex. 122, Test. Dr. Creinin 657-58.)

Beyond 18 weeks, Dr. Creinin uses Dilapan or Lamicel to soften the cervix. Dr. Creinin inserts an average of 5 Dilapan at 20 weeks of gestation and leaves them in place for an average of 24 hours. The number of Dilapan Dr. Creinin places is determined by estimating the amount needed to obtain the minimal necessary dilation to empty the uterus without causing undue discomfort to the woman or inducing labor and delivery. Dr. Creinin explained that Dilapan, Lamicel, and laminaria are not the same, but they are all osmotic dilators. Dilapan and laminaria perform the same function, but Dr. Creinin believes using Dilapan is more effective and reduces the likelihood of needing multiple insertions of osmotic dilators to obtain adequate cervical dilation. In Dr. Creinin's view, Dilapan is also more reliable in providing dilatation. (Ex. 122, Test. Dr. Creinin 658-59, 662, 735, 743, 787.)[54]

Dr. Creinin performs dismemberment D & Es with minimal cervical dilation to perform the procedure as safely as possible. (Ex. 122, Test. Dr. Creinin 740.) Dr. Creinin believes that inserting more dilators may induce labor and result in delivering the fetus when the patient is not under a doctor's supervision. Further, using more dilators may increase the level of pain the woman experiences. (Ex. 122, Test. Dr. Creinin 743-44.)

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[54] This April 5, 2004, testimony is difficult to reconcile with Dr. Frederiksen's. She stated that Dilapan was a synthetic osmotic dilating rod with superior dilating power which achieved maximum cervical dilation in four hours, but it was removed from the market in the United States and is no longer available in this country. She acknowledged using it in the past, and stated she experienced no problems with this product, but Dilapan was reportedly prone to fragment which caused a risk of infection. (Ex. 123, Test. Dr. Frederiksen 1187-89.)

Dr. Creinin tries to achieve a minimum of 1.75 to 2 centimeters of dilation at 18 to 19 weeks of gestation, and 2 to 2.5 centimeters of dilation at 20 weeks of gestation and thereafter, but he cannot predict the actual extent of dilation for individual women. The extent of dilation varies based on the patient's parity and past medical history. (Ex. 122, Test. Dr. Creinin 661-62 & 742-43.)

Once Dr. Creinin inserts the Dilapan, the patient is allowed to go home. Most women are able to resume their normal activities. Dr. Creinin provides his patients with instructions which state that they may experience mild cramping, can use over-the-counter pain medications, and should call the doctor if they experience severe cramps. They are told to return the following day for surgery. Dr. Creinin receives about one call per year from women requesting stronger pain medication. (Ex. 122, Test. Dr. Creinin 660.)

If adequate dilation does not occur within a day, Dr. Creinin may insert more Dilapan and delay the patient's surgery until later in the day or until the next day. (Ex. 122, Test. Dr. Creinin 660-61.) In unusual circumstances, Dr. Creinin administers vaginal misoprostol. (Ex. 122, Test. Dr. Creinin 661.)

Dr. Creinin performs procedures beyond 18 weeks of gestation in an operating room under deep sedation with the assistance of an anesthesiologist or anesthetist. In rare circumstances, he may administer a spinal block or general anesthesia. (Ex. 122, Test. Dr. Creinin 663.) According to Dr. Creinin, for those D & Es he performs in an operating room, the woman is placed in stirrups (a lithotomy position), a speculum is inserted, and the dilators are removed. The cervix and vagina are cleansed, and a local anesthetic with Vasopressin

(which constricts the blood vessels in the cervix and lower uterus) is injected into the cervix. (Ex. 122, Test. Dr. Creinin 663.)

Dr. Creinin uses a tenaculum to grasp and pull the cervix to stabilize and position the uterus. Dr. Creinin testified that the uterus sits at an angle to the vagina, especially at gestational ages of 18 weeks or more. According to Dr. Creinin, aligning the uterus with the vagina reduces the need to maneuver instruments at an angle and lowers the risk of uterine perforation. (Ex. 122, Test. Dr. Creinin 663-64.) Dr. Creinin testified that depending on the woman's parity, grasping the cervix with the tenaculum may lower it to the level of the vaginal opening, which may push the speculum completely or partially out. (Ex. 122, Test. Dr. Creinin 665.)

Dr. Creinin stated that unless the membranes have already ruptured, he ruptures the amniotic sac and suctions out the fluid using a cannula under direct visualization with ultrasound. If the cannula does not break the amniotic sac, a ring forceps can be used. Dr. Creinin finds that when the amniotic fluid is suctioned out, the uterus compresses and the fetal parts migrate toward the cervix. (Ex. 122, Test. Dr. Creinin 665-66.)

Dr. Creinin then inserts forceps into the lower uterus to grab whatever fetal part presents itself. Dr. Creinin's goal is to grab a lower extremity or a body part other than the fetal head, as it is very difficult to grasp and pull the fetal head first. Dr. Creinin uses ultrasound to locate, grasp, and pull a lower limb to maneuver the fetus and convert it to a breech position. (Ex. 122, Test. Dr. Creinin 666-69.) Dr. Creinin uses ultrasound guidance for all abortion procedures where

instruments (other than a suction cannula) are placed in the uterus. (Ex. 122, Test. Dr. Creinin 667-68.)

Dr. Creinin then pulls the fetus, or whatever part has been grabbed, through the cervix until there is resistance from the lower uterine segment or the internal os of the cervix. This resistance or traction while pulling on the grasped fetal part causes dismemberment. (Ex. 122, Test. Dr. Creinin 667-68.) When there is resistance or traction, Dr. Creinin minimally rotates the fetus to try to ease it through the cervix to reduce the number of instrument passes. The fetus may dismember during this process. (Ex. 122, Test. Dr. Creinin 678.)

Dr. Creinin's goal is to remove the fetus as intact as possible, with fewer instrument passes and increased safety for the woman. (Ex. 122, Test. Dr. Creinin 667.)

Dr. Creinin has observed that a fetus may have a heartbeat and pass through the cervix intact or substantially intact past the level of the fetal umbilicus. In Dr. Creinin's experience, this occurs at least once per month. (Ex. 122, Test. Dr. Creinin 678-79 & 681.)

Dr. Creinin testified that a fetal body may pass through the cervix intact or relatively intact to the level of the calvarium, with the fetal head stuck at the internal cervical os. This has occurred about 50 times over Dr. Creinin's career. When it occurs, Dr. Creinin usually pulls until the fetus comes apart at the neck. On occasion he inserts scissors into the fetal head and uses a cannula to suction the brain tissue and collapse the skull. (Ex. 122, Test. Dr. Creinin 680 & 744-47.)

On five to ten occasions over Dr. Creinin's career, the cervical dilation was so extensive that the fetus could be removed intact without collapsing the skull. If the fetus is less than 24 weeks of gestation, Dr. Creinin

holds the fetus in the mother and collapses the fetal skull while it is still in the uterus to avoid delivering a living fetus. (Ex. 122, Test. Dr. Creinin 747-48.)

If Dr. Creinin dismembers the fetus, as with the other body parts, the fetal head is grasped, crushed, and removed through the cervix. (Ex. 122, Test. Dr. Creinin 679.) Once Dr. Creinin removes the fetal parts, he removes the placenta. He then uses a cannula to suction the uterine lining, and with ultrasound assistance, uses a curette to feel the lining to assure that the uterus is empty. (Ex. 122, Test. Dr. Creinin 679-80.) Dr. Creinin then checks the level of bleeding, removes the tenaculum, and inspects the cervix for lacerations or tears. The speculum, if any, is removed, and the procedure is then complete. (Ex. 122, Test. Dr. Creinin 680.)

Dr. Creinin estimates that the extraction portion of the D & E procedure takes approximately five minutes. (Ex. 122, Test. Dr. Creinin 741.)

Dr. Creinin's patients may go home approximately two hours after the D & E is completed. Most of his patients do not return for follow-up care. (Ex. 122, Test. Dr. Creinin 682-83 & 751.)

(b) LABOR INDUCTION

While Dr. Creinin views labor induction as safe, he does not perform this method of abortion. The vast majority of women at his institution who are seeking an elective abortion or an abortion for maternal and fetal indications choose the D & E. As such, he does not have significant experience with labor-induction abortion, believes that in his hands a D & E is a safer procedure, and he refers patients to other physicians if

they choose to abort by induction. (Ex. 122, Test. Dr. Creinin 710-12 & 767-68.)

x. DR. MAUREEN PAUL

Dr. Paul is a physician who is board-certified in obstetrics and gynecology and in occupational and environmental medicine. She completed residencies in obstetrics and gynecology at the University of Washington in 1981 and at Tufts University Medical School in 1984. She completed her residency in occupational medicine at the University of Massachusetts in 1987. She is a fellow of ACOG. Dr. Paul is the chief medical officer of Planned Parenthood Golden Gate, which includes eight treatment sites located throughout the San Francisco Bay area. In her capacity with Planned Parenthood, she oversees the quality of that facility's medical care, provides direct clinical services, participates in strategic planning, hires physicians, supervises the physicians and advanced practice clinicians providing care at that facility, and develops clinical protocols. In addition to general gynecological care, Planned Parenthood Golden Gate provides abortion care at all eight of its facilities. Dr. Paul is an associate professor in the Department of Obstetrics, Gynecology, and Reproductive Sciences at the University of California at San Francisco ("UCSF") and the Director of Training at the UCSF Center for Reproductive Health Research and Policy. In both of these capacities, she teaches abortion techniques to residents and medical care providers. (Ex. 125, Test. Dr. Paul 5-11 & Sub-Ex. 125A.)

Dr. Paul has authored several peer-reviewed and published articles and was the editor-in-chief of the 1999 textbook publication, *A Clinician's Guide to*

Medical and Surgical Abortion, which Dr. Paul described as the standard reference text on abortion care. (Ex. 125, Test. Dr. Paul 11-12.) Dr. David Grimes was a co-editor of this textbook. (Ex. 125, Test. Dr. Paul 26.)[55]

Dr. Paul performs early medical abortions, D & Cs, and D & Es at Planned Parenthood outpatient clinics. Although she was trained in residency to perform D & Es to 23 weeks, the latest gestational age she performs D & Es is 18 and 6/7 weeks. Dr. Paul estimates that in "1 to 10 to 1 to 20" of the D & Es she performs, the fetus delivers intact up to the head. (Ex. 125, Test. Dr. Paul 7, 9, 71.)

(a) UNITED STATES ABORTION PRACTICE

Based on statistics from the Centers for Disease Control (Ex. 32, at 16)[56] for the year 2000, 88% of abortions were performed at less than 13 weeks of gestation, 6.2% were performed between 13 and 15 weeks of gestation; 4.3% were performed between 16 and 20 weeks of gestation; and 1.4% (or approximately 18,000) were performed after 20 weeks of gestation. (Ex. 125, Test. Dr. Paul 38-42.)

Dr. Paul testified that a shortage of abortion providers exists in the United States, with about 87% of the counties having no abortion provider. Of the available abortion providers, most are trained to perform only first-trimester abortions. Dr. Paul stated

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[55] Dr. Westhoff co-authored the "Procedure Selection" chapter of this textbook.

[56] This article, the CDC MMWR dated November 28, 2003, was received into evidence without objection.

that those trained to do second-trimester abortions are likely trained to do induction abortion rather than D & E. (Ex. 125, Test. Dr. Paul 43.)

Dr. Paul testified that most D & Es are done in outpatient clinics, while induction abortions, which require medications administered over several hours and perhaps for two days with associated pain and side effects, are generally done in a hospital. (Ex. 125, Test. Dr. Paul 45-46.)

Based on CDC data for the year 2000 (Ex. 32, at 32, tbl. 18), 95% of all second-trimester abortions at 16 to 20 weeks of gestation were performed by D & E. After 20 weeks of gestation, 85% were performed by D & E, with the remainder performed by labor induction. As used by the CDC, the D & Es reported include the intact D & E variation. (Ex. 125, Test. Dr. Paul 47-49.)

(b) D & E

Dr. Paul testified that the goal of any abortion is to get something larger, the fetus, out of something smaller, the cervix, without causing injury to the cervix. (Ex. 125, Test. Dr. Paul 51-52.)

Dr. Paul acknowledged that a D & E abortion can occur by dismemberment or intact removal of the fetus. Dr. Paul characterizes the intact D & E as a variant of the D & E. (Ex. 125, Test. Dr. Paul 44-45.) According to Dr. Paul, the level of cervical dilation determines whether an intact or dismemberment D & E is performed, and Dr. Paul cannot predict which will occur at the outset of performing the D & E. (Ex. 125, Test. Dr. Paul 71 & 121.)

From the 14th to the beginning of the 16th week of gestation, Dr. Paul uses misoprostol alone to dilate the

cervix. (Ex. 125, Test. Dr. Paul 61.) Dr. Paul testified that misoprostol tablets can be administered vaginally, orally, buccally, or sublingually to prepare the cervix; that the cervix is composed of collagen fibers that are cross-linked; and that the effect of misoprostol on these fibers, along with the contractions of the uterus initiated by using misoprostol, is to dilate and soften the cervix. (Ex. 125, Test. Dr. Paul 58-59.) Dr. Paul administers misoprostol buccally between 90 minutes and 3 hours before the D & E surgery. Once misoprostol is administered, Dr. Paul does not allow the woman to leave the clinic due to the risk of induced contractions leading to spontaneous abortion. (Ex. 125, Test. Dr. Paul 59.)

At 16 weeks of gestation and thereafter, Dr. Paul places laminaria into the cervix. According to Dr. Paul, the laminaria absorb fluid from the cervix and vagina, expand, and gradually stretch the cervix open. The laminaria remain inserted overnight. (Ex. 125, Test. Dr. Paul 52, 55, 57, 61.)

To insert the laminaria, Dr. Paul places a speculum into the vagina to open it up and permit visualization of the cervix. She then cleans the cervix with antiseptic and anesthetizes the cervix. Dr. Paul places the laminaria in the external os, through the cervical canal, and a little past the internal os. The laminaria vary in width. Dr. Paul inserts as many laminaria as will comfortably fit without forcing them into the cervix. However, the minimum used by gestational age is 3 at 16 to 17 weeks of gestation, and 4 at 17 to 18 weeks of gestation. Once the laminaria are inserted, the woman is allowed to return to her normal life. In Dr. Paul's practice, a second insertion of laminaria occurs only rarely. (Ex. 125, Test. Dr. Paul 53-55 & 60.)

At 17 weeks of gestation or greater, Dr. Paul uses laminaria and misoprostol in combination. (Ex. 125, Test. Dr. Paul 61-62.) Dr. Paul cannot predict the amount of dilation that will be achieved because women respond differently to the laminaria and misoprostol. (Ex. 125, Test. Dr. Paul 55.) Enough dilation is needed to permit the instruments to be inserted with some extra room to maneuver the instruments. In Dr. Paul's opinion, greater cervical dilation is better because the D & E is easier to perform with greater dilation. (Ex. 125, Test. Dr. Paul 55 & 57.)

Before the surgical portion of the D & E begins, Dr. Paul performs a pelvic examination to check the size and position of the uterus. If laminaria were inserted, she may be able to remove them at this time with her fingers. The uterus sits at an angle to the cervix, and as the pregnancy progresses and the uterus grows, that position changes. However, Dr. Paul testified that the position of the uterus in an individual woman is not predictable and must be assessed before inserting instruments which could damage the uterus. (Ex. 125, Test. Dr. Paul 62-64.)

Dr. Paul then inserts a speculum into the vagina to visualize the cervix and uses a tenaculum to grasp the cervix, stabilize it, and allow the doctor to remove the laminaria, move the cervix toward the vaginal opening, and move the cervix around during the evacuation procedure. The cervix is then anesthetized. (Ex. 125, Test. Dr. Paul 64-65.) The patient is not under general anesthesia, but pain medications and sedation are administered through an intravenous line. (Ex. 125, Test. Dr. Paul 64.)

Dr. Paul stated that without the tenaculum in place, the cervix may be within a couple inches of the vaginal

opening. With the tenaculum in place, the angle between the cervix and uterus is straightened, the cervix is moved closer to the vaginal opening, and the doctor's ability to see while using instruments is improved. (Ex. 125, Test. Dr. Paul 65-66.)

Dr. Paul then breaks the amniotic sac and drains or suctions the remaining fluid. (Ex. 125, Test. Dr. Paul 66-67.) Dr. Paul inserts forceps through the cervical opening while the doctor continues to pull on the cervix with the tenaculum to straighten the angle. Sometimes the fetus dismembers and Dr. Paul removes it in pieces, and sometimes she removes the fetus as a whole, at least to the level of the fetal head. (Ex. 125, Test. Dr. Paul 67-68.)

If the level of dilation permits, rather than using her forceps to firmly grasp the fetal parts, Dr. Paul uses forceps to gently draw the fetal tissue out of the cervix in an attempt to deliver the fetus as intact as possible. (Ex. 125, Test. Dr. Paul 70-71.) With Dr. Paul's administration of osmotic dilators and misoprostol, the living fetus may be completely or partially expelled past the level of the umbilicus and outside the woman's body before the surgical portion of the D & E begins. If this occurs, or if the fetal body is removed intact during the D & E to the level of the calvarium, Dr. Paul may disarticulate the fetal body at the neck. However, it is Dr. Paul's preference, and she is more likely, to use her forceps to collapse the fetal skull and deliver the fetus intact. In either case, she believes she has performed a lethal act on a vaginally delivered living fetus. (Ex. 125, Test. Dr. Paul 60-61, 69-70, 79.)

If the head is lodged at the cervical os, the fetus can be disarticulated at the neck, or, as is Dr. Paul's preference, the doctor can reach in with the forceps,

collapse the skull, and remove the fetus intact. (Ex. 125, Test. Dr. Paul 69-70 & 110.) Dr. Paul testified that it would be very unusual to perforate the uterus by collapsing the skull with forceps because most perforations occur at the top of the uterus while searching for fetal parts, and not at the lower area of the uterus near the cervix. (Ex. 125, Test. Dr. Paul 111.)

Once the fetus is removed, Dr. Paul removes the placenta by suction curettage. (Ex. 125, Test. Dr. Paul 74.) Dr. Paul believes that a D & E results in the deliberate and intentional vaginal delivery of a living fetus. (Ex. 125, Test. Dr. Paul 76.)

Many of Dr. Paul's D & E procedures, especially those done at (and presumably after) 16 weeks of gestation, are performed under ultrasound guidance. (Ex. 125, Test. Dr. Paul 67.)

xi. DR. CAROLINE WESTHOFF

Dr. Westhoff is a 1977 graduate of the University of Michigan medical school who is board-certified in obstetrics and gynecology. She is employed at Columbia University College of Medicine as a professor of obstetrics and gynecology, and as a professor of epidemiology and of population and family health for the School of Public Health. She is an attending physician at New York Presbyterian Hospital, the medical director of the hospital's family-planning clinic, and the director of the Special GYN Service at its Allen Pavilion.[57] Approximately 20,000 patients are seen per

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[57] There is no real description of whether the Allen Pavilion is a hospital or a clinic, but it has operating rooms and access to general anesthesia. The facility serves a predominantly "Medicaid population." (Ex. 126, Test. Dr. Westhoff 986-91 & 1018-20.)

year at the family planning clinic, and between 2,000 and 3,000 patients are seen at the Special GYN Service per year to obtain tubal ligation, abortion care, or care for miscarriages. Dr. Westhoff is an attending physician at these facilities two days per week, supervises and manages all care provided at that these facilities, and personally sees approximately 500 patients per year at each of these facilities. Her private practice through Columbia University focuses on miscarriage and abortion care, and in that capacity, she sees slightly less than 500 patients a year. She has been performing abortions since 1978, and currently performs abortions in her private practice and at the Special GYN Service. (Ex. 126, Test. Dr. Westhoff 731-43 & Sub-Ex. 126A.)

Dr. Westhoff is a fellow of ACOG, a member of the board of directors for the Association of Reproductive Health Professionals and the American Medical Women's Association, and a member of the American Public Health Association and the National Abortion Federation. She has authored several peer-reviewed and published articles, primarily in the areas of contraception, ovarian cancer epidemiology, and first-trimester medical abortions. She co-authored the "Procedure Selection" chapter of *A Clinician's Guide to Medical and Surgical Abortion*, a medical textbook published in 1999 used for teaching in the field of abortion practice. The "Procedure Selection" chapter discusses the intact D & E abortion method. Dr. Westhoff was a five-year member of the United States Preventative Services Task Force, has participated in study sections or initial review groups for the National Institutes of Health, and was an advisor to the National Institute of Child Health and Human Development. She has been an expert witness in Michigan and New

Jersey cases challenging legislation banning partial-birth abortions. (Ex. 126, Test. Dr. Westhoff 754-57, 761-64 & Sub-Ex. 126A.)

Since 1978, Dr. Westhoff has performed several thousand abortions. (Ex. 126, Test. Dr. Westhoff 742.) She performs medical abortions up to 9 weeks, D & Cs up to 12 or 13 weeks, D & Es from 14 weeks through 23 and 6/7 weeks, and she has performed several hundred labor-induction abortions in the past. In 1997, she performed 400 out of 500 second-trimester abortions by labor induction. Since the Special GYN Services at the Allen Pavilion opened in 2001, Dr. Westhoff now refers those who choose labor induction. (Ex. 126, Test. Dr. Westhoff 744-45 & 985-86.) Dr. Westhoff performed a total of 250 D & Es, 50 of which were intact D & Es, at the special GYN Service for 2003, and around 750 for the years 2001 through 2003. Dr. Westhoff personally performed or supervised students performing 50 D & Es, including the intact version, in 2003. (Ex. 126, Test. Dr. Westhoff 750-51 & 979.)

(a) D & C

Dr. Westhoff begins a D & C procedure by positioning the patient on a procedure table in the manner used for a gynecologic examination and administering antiseptics and analgesics. Dr. Westhoff grasps the cervix with a tenaculum, stretches the cervical opening to an appropriate diameter with a mechanical dilator, inserts a suction cannula into the uterus through the cervical os, and removes the uterine contents by vacuum aspiration. (Ex. 126, Test. Dr. Westhoff 771-72.)

Dr. Westhoff testified that the uterus lies suspended by ligaments in the woman's pelvic cavity. She explained that the tenaculum is an instrument used to

grasp the cervix in order to pull down on the uterus and this traction stabilizes the uterus so that it does not move when instruments are inserted. (Ex. 126, Test. Dr. Westhoff 772.)

Dr. Westhoff stated that a D & C can be used from the earliest time that a pregnancy is diagnosed throughout the first trimester and perhaps in the very early part of the second trimester, but usually a D & E is required in the second trimester. (Ex. 126, Test. Dr. Westhoff 773.)

(b) D & E

Based on CDC data, Dr. Westhoff testified that 95% of all second-trimester abortions are performed by D & E. This statistic includes the intact D & E variation. (Ex. 126, Test. Dr. Westhoff 778-80.)

For Dr. Westhoff's D & E procedures, the patient is seen one or two days prior to the D & E to obtain a routine history, physical examination, and an additional sonogram to confirm the fetus's gestational age. This information is used to determine which abortion options should be discussed with the patient. (Ex. 126, Test. Dr. Westhoff 780-81 & 993.)

Unless Dr. Westhoff's patients ask for additional information, they are generally not told their fetus may be dismembered or the fetal head crushed or aspirated. Dr. Westhoff's patients are advised that the fetus and placenta will be removed from the uterus as safely as possible, but exactly how that will occur proceeds differently with each patient. (Ex. 126, Test. Dr. Westhoff 797.)

For Dr. Westhoff's patients who wanted a child but must have a second-trimester abortion, the woman may

want to hold the fetus as part of the grieving process. For these women, Dr. Westhoff explains that labor may be induced or an intact D & E attempted, but an intact D & E cannot be guaranteed. The woman is also told the fetal skull will be empty if she chooses an intact D & E. (Ex. 126, Test. Dr. Westhoff 830-31 & 833-34.)

Dr. Westhoff inserts osmotic dilators once or twice under local anesthesia. (Ex. 126, Test. Dr. Westhoff 785.) Once the laminaria are inserted, Dr. Westhoff allows the woman to go home or return to work. (Ex. 126, Test. Dr. Westhoff 814.)

Dr. Westhoff's assessment of whether dilators are inserted serially over two days depends on the fetus's gestational age and the woman's anatomy and history. If inserted over two days, the woman returns after the first day to have the first set of dilators removed and a second set inserted. Occasionally misoprostol is administered a few hours before the procedure to further soften the cervix. Dr. Westhoff testified that the amount of dilation needs to be greater as the pregnancy progresses. (Ex. 126, Test. Dr. Westhoff 785-86 & 998-99.)

According to Dr. Westhoff, the cervical dilation the woman presents with, and the woman's response to dilation procedures, varies widely. Some women present with three to four centimeters of dilation before any dilation procedure is started. (Ex. 126, Test. Dr. Westhoff 788.)

Dr. Westhoff's goal with every D & E is to remove the fetus as intact as possible, so her dilation process does not differ between intact and dismemberment D & Es. (Ex. 126, Test. Dr. Westhoff 795.)

Dr. Westhoff stated that dilation of the cervix with mechanical dilators, as opposed to osmotic dilators, can tear and scar the cervix, but whether that leads to problems in subsequent pregnancies is unknown. (Ex. 126, Test. Dr. Westhoff 996-98.)

In a hospital operating room, Dr. Westhoff administers general anesthesia to the woman, removes the cervical dilators, ruptures the amniotic sac, and allows the sac to drain. (Ex. 126, Test. Dr. Westhoff 786.) Dr. Westhoff uses a tenaculum to grasp the cervix. She inserts a finger or instrument into the uterine cavity through the cervix to begin pulling down fetal parts. (Ex. 126, Test. Dr. Westhoff 786).

According to Dr. Westhoff, although 95% of term fetuses present in the vertex position, second-trimester fetuses are in a variety of positions because of the additional room available in the uterus. One-third of second-trimester fetuses are vertex; one-third breech; and one-third transverse. Therefore, the part of the fetus Dr. Westhoff initially grabs during second-trimester D & Es varies. (Ex. 126, Test. Dr. Westhoff 788.)

Dr. Westhoff removes the fetus by pulling fetal parts with instruments or digits. If the fetus is dismembered, she examines the parts to assure that all parts have been removed, and then delivers the placenta with a combination of suction curettage and a sharp curette. (Ex. 126, Test. Dr. Westhoff 787.)

Dr. Westhoff prefers to minimize the number of instrument passes into the uterine cavity, and therefore, prefers to remove the fetus as intact as possible. However, whether she performs a dismemberment or an intact D & E depends on individual circumstances

encountered as the procedure evolves. Dr. Westhoff cannot accurately predict at the outset of the procedure which variation of D & E will actually be performed. (Ex. 126, Test. Dr. Westhoff 794.)

Dr. Westhoff testified that for any fetal part that is too large to pass through the cervix, including the fetal head, she reduces the diameter of the part by severing, crushing, or collapsing it. Dr. Westhoff must crush or collapse the fetal head in the vast majority of D & Es. (Ex. 126, Test. Dr. Westhoff 798.)

In a dismemberment D & E, Dr. Westhoff cannot directly visualize the fetal head, so sonography must be used. Dr. Westhoff uses a long forceps to grasp the skull and crush it to drain the skull contents and reduce its size. Dr. Westhoff described this as difficult, requiring several instrument passes to accomplish. (Ex. 126, Test. Dr. Westhoff 799 & 801.)

In Dr. Westhoff's intact D & E procedures, a hole is placed in the base of the fetal skull under direct visualization. The contents drain spontaneously in most cases, and if not, the contents are suctioned. The skull bones will then collapse inward without any external application of force and Dr. Westhoff can remove the skull from the uterus. (Ex. 126, Test. Dr. Westhoff 799-800 & 1004-05.)

In Dr. Westhoff's experience, the intact D & E occurs more commonly (but in less than half the cases) at 18 to 20 weeks of gestation or later, but it can occur earlier in the second trimester. (Ex. 126, Test. Dr. Westhoff 801-02.)

Dr. Westhoff estimates that the surgical portion of the D & E lasts, on average, about 20 minutes, but can be as short as 10 minutes and as long as an hour (or

more if there are complications). (Ex. 126, Test. Dr. Westhoff 813-14.)

Dr. Westhoff generally performs her D & Es under ultrasound guidance. (Ex. 126, Test. Dr. Westhoff 786-87.)

(c) LABOR INDUCTION

Dr. Westhoff remains familiar with the current medical literature and has prepared a teaching tape on behalf of ACOG for use by physicians learning about the use of prostaglandins for performing abortions. (Ex. 126, Test. Dr. Westhoff 744.)

Based on CDC data, Dr. Westhoff testified that labor induction is used in about 5% of all second-trimester abortions. (Ex. 126, Test. Dr. Westhoff 802.)

According to Dr. Westhoff, using osmotic dilators prior to starting an induction abortion will shorten the procedure. (Ex. 126, Test. Dr. Westhoff 790-91.)

xii. DR. CASSING HAMMOND

Dr. Hammond received his medical degree from the University of Missouri in Kansas City in 1988 and completed his residency in obstetrics and gynecology at the University of Rochester in Rochester, New York, in 1992. He became board-certified in obstetrics and gynecology in 1994. He is a diplomate of the National Board of Medical Examiners. Dr. Hammond is employed as a physician by the Northwestern Medical Faculty Foundation at the Northwestern University Medical School, and is an assistant professor in Northwestern University's Department of Obstetrics and Gynecology. He teaches medical students, residents, and fellows; administers policy regarding the general and high-risk obstetric and gynecologic care provided

through the Prentice Ambulatory Care Clinic for low-income women; and directs the obstetrics and gynecology rotational training for third-year medical students at the Prentice Women's Hospital. Within his faculty-based practice, 60% of his professional time is spent treating patients as a general OB/GYN physician. He delivers approximately 100 babies per year. The remainder of his time is spent providing OB/GYN patient care to women with severe disabilities at the Rehabilitation Institute of Chicago, providing OB/GYN care to women with AIDS at Northwestern Memorial's Comprehensive Women's AIDS Center, and supervising and performing first- and second-trimester pregnancy terminations. (Ex. 124, Test. Dr. Hammond 517-27 & Sub-Ex. 124B.)

Dr. Hammond supervises and performs pregnancy terminations from very early in gestation through 24 weeks. He provides abortion services approximately two days a week at Northwestern's family-planning center, and he supervises Northwestern's two-year fellowship program in family planning and contraceptive research, which includes teaching abortion procedures. Dr. Hammond is a fellow of ACOG. He has offered testimony challenging Illinois and Ohio partial-birth abortion statutes. (Ex. 124, Test. Dr. Hammond 517-25, 527, 536, 539-40 & Sub-Ex. 124A.)

Dr. Hammond has been performing abortions for 15 years and performs medical abortions in the first trimester with medications that induce miscarriage, D & Cs, labor induction, and D & Es up to 24 weeks. Over the course of his career, he has performed at least 3,000 abortions, including at least 1 ,000 D & Es. At 20 to 24 weeks of gestation, 95% of the abortions Dr. Hammond performs are D & Es, with the remainder being labor

induction. Dr. Hammond estimates that at least three times per month a fetus will deliver intact to the level of the fetal calvarium, and in about half of his D & Es from 20 to 24 weeks, he is able to remove the fetus intact to the level of the fetal navel or above. (Ex. 124, Test. Dr. Hammond 526-28, 530, 533, 668, 675.)

(a) D & E

Dr. Hammond characterizes the intact D & E as a variation of the D & E. For every D & E performed, Dr. Hammond tries to remove the pregnancy as intact and as expeditiously as possible. (Ex. 124, Test. Dr. Hammond 531-32.)

In Dr. Hammond's practice, for most women at 20 to 24 weeks of gestation, the pregnancy is being terminated to preserve the mother's health or because of a fetal anomaly. The patient's psychological condition is fragile. By the time Dr. Hammond sees these patients, they have usually been counseled by maternal-fetal medicine specialists concerning D & E and labor-induction abortion. Nonetheless, Dr. Hammond re-advises them of their options and explains that the fetus may be dismembered and, in some cases (depending on the patient's desire to know and psychological state), he explains that the skull will be collapsed with the forceps. Most of the women he sees have already been advised of their abortion options and were referred to him because they chose D & E. Dr. Hammond believes these women choose D & E based on a personal need and desire to avoid the pain and length of labor when they are already losing a wanted pregnancy. (Ex. 124, Test. Dr. Hammond 544-46 & 656-61.)

Dr. Hammond testified that some women are now choosing D & E and requesting that it be done as intact

as possible because they want the control and predictability of the D & E, but want the ability to hold the fetus afterward. Dr. Hammond tells such patients that an intact D & E cannot be guaranteed, and that the fetus may need to be dismembered, but the doctors will do their best. (Ex. 124, Test. Dr. Hammond 551-52.) Dr. Hammond stated that fetal tissue dismembers more easily at 20 weeks of gestation than at 24 weeks of gestation. (Ex. 124, Test. Dr. Hammond 671.)

For Dr. Hammond, the D & E is a two-day procedure involving dilation of the cervix followed by surgical removal of the uterine contents. (Ex. 124, Test. Dr. Hammond 530-31.) Dr. Hammond's dilation protocol for D & Es is based on the gestational age of the fetus, with the goal being to obtain sufficient dilation to perform an intact D & E in every case. (Ex. 124, Test. Dr. Hammond 597.)

At 20 to 24 weeks of gestation, Dr. Hammond typically inserts 2 to 3 sets of laminaria, and for late second-trimester abortions, he may insert as many as 15 to 20 laminaria. (Ex. 124, Test. Dr. Hammond 672-73.) Laminaria are inserted 24 hours before the scheduled D & E surgery. (Ex. 124, Test. Dr. Hammond 673.) For women with an especially tight cervix, Dr. Hammond may administer a combination of misoprostol and a third set of laminaria the morning of the D & E. (Ex. 124, Test. Dr. Hammond 673.) Dr. Hammond administers general anesthesia to those patients beyond 16 to 18 weeks of gestation. (Ex. 124, Test. Dr. Hammond 573.)

In the operating room, Dr. Hammond inserts a suction curette into the uterus and suctions out the amniotic fluid. (Ex. 124, Test. Dr. Hammond 676.) In the majority of Dr. Hammond's cases, suctioning the

amniotic fluid will cause the umbilical cord to come out. Dr. Hammond cuts the cord and the fetus eventually dies. (Ex. 124, Test. Dr. Hammond 676.)

Dr. Hammond may use forceps to grasp a fetal part, pull it down, and re-grasp the fetus at a higher level—sometimes using both his hand and a forceps—to exert traction to retrieve the fetus intact until the head is lodged in the cervical os. (Ex. 124, Test. Dr. Hammond 679.)

Dr. Hammond testified that a breech extraction D & E refers to reaching into the uterus and, if the fetus is presenting in a breech or buttocks-first position, grasping the lower extremity and gradually delivering the fetus to the level of the fetal head or calvarium. (Ex. 124, Test. Dr. Hammond 532.) A breech presentation allows for delivery of the fetus intact up to the level of the fetal navel or above. (Ex. 124, Test. Dr. Hammond 533-34.) Dr. Hammond occasionally converts the fetus to a breech position. (Ex. 124, Test. Dr. Hammond 686.)

Sometimes another physician assists Dr. Hammond in performing D & Es by pressing on the woman's abdomen to put pressure on the uterus to expel the fetus. (Ex. 124, Test. Dr. Hammond 680.)

As Dr. Hammond is removing the fetus, it is rotated so the abdomen faces downward. With help from his surgical assistant, Dr. Hammond raises the anterior lip of the cervix to allow the doctor to insert a forceps and, under direct visualization or by sense of feel, to permit the forceps to be inserted into the base of the fetal skull to collapse the skull. (Ex. 124, Test. Dr. Hammond 680-81.) At 20 weeks of gestation or later, Dr. Hammond usually uses a scissors at the base of the fetal skull to collapse it. At less than 20 weeks, Dr. Hammond can

usually use his finger because the skull is softer. (Ex. 124, Test. Dr. Hammond 606-07.)

Dr. Hammond uses ultrasound occasionally, but not routinely, to assist in determining if all fetal parts have been removed. He testified that routine use of ultrasound would lengthen the procedure and the patient's exposure to anesthesia. (Ex. 124, Test. Dr. Hammond 572-73.)

(b) LABOR INDUCTION

Dr. Hammond induces labor by administering vaginal misoprostol suppositories periodically until the woman delivers the fetus. If the fetus is dead at the start of the procedure, the induction abortion lasts 12 to 24 hours in 90% of cases. If the fetus is alive, 12 to 24 hours is the lower limit of time needed for an induction abortion. (Ex. 124, Test. Dr. Hammond 668-69.)

xiii. DR. WATSON A. BOWES, JR.

Dr. Watson A. Bowes, Jr., is an obstetrician and gynecologist who is currently Professor Emeritus of Obstetrics and Gynecology at the University of North Carolina in Chapel Hill. Dr. Bowes is board-certified in obstetrics, gynecology, and maternal-fetal medicine. Dr. Bowes graduated from the University of Colorado Medical Center in 1959, after which he completed an internship at a hospital associated with the Dartmouth Medical School. He then completed residencies in general practice, obstetrics, and gynecology, as well as a fellowship in fetal physiology at the University of Colorado. In 1965, he entered private OB/GYN practice and served as part-time faculty at the University of Colorado. Beginning in 1967, Dr. Bowes spent two years in the Army Medical Corps, after which he took a

faculty position in the Department of Obstetrics and Gynecology at the University of Colorado until 1982. He then became a faculty member in the Department of Obstetrics and Gynecology at the University of North Carolina, where he remained until his 1999 retirement. Dr. Bowes still serves on the institutional review board of the University of North Carolina medical school, is an editor-in-chief of a medical journal related to obstetrics and gynecology, and is a peer reviewer for two medical journals. Dr. Bowes is a fellow of ACOG and has served on the committee on ethics for five years. (Ex. 525; Tr. 897-903, Test. Dr. Bowes.)

Dr. Bowes has performed D & Cs for incomplete miscarriages; suction curettage; and induction of labor for fetal death in the second trimester of pregnancy. He has supervised D & Es on demised fetuses. His experience with these procedures is predominantly in situations in which the fetus has died *in utero* before the procedure begins, although he has supervised "some number" of induction abortions on live fetuses in both the first and second trimesters. Over the course of his career, Dr. Bowes has supervised or assisted in performing D & Es on live fetuses in two or three cases and he has performed approximately 150 procedures on demised fetuses, 40 to 80 of those being inductions and the remainder D & Es that he supervised. He has never observed or supervised an intact D & E. He has had no formal training on abortion techniques or procedures since 1965. (Tr. 903-05, 920- 21, 944-45, 948, 952-53, Test. Dr. Bowes.)

Dr. Bowes first became aware of the so-called "partial-birth abortion" in 1995 when Congressman Canady asked him to critique statements that had been submitted supporting use of the procedure. Dr. Bowes

submitted letters to the House and Senate commenting on specific questions posed by Congressman Canady and Senator Santorum regarding the banned procedure. Dr. Bowes has been involved in six lawsuits dealing with state laws that purported to ban the procedure, uniformly testifying in support of the constitutionality of these bans. (Tr. 914-15, 950-51, 993, Test. Dr. Bowes.) Dr. Bowes has also testified in support of other state statutes imposing restrictions on abortions. (Tr. 951-52, Test. Dr. Bowes.) Dr. Bowes agrees that "because [he] believe[s] that the intact D & E procedure has comparable risk to other available procedures, [his] support for the partial-birth abortion act is not based on any concerns for protecting maternal health"; rather, he is ethically opposed to abortion in general, would support a ban on all abortions as long as the law contained an exception for when the woman's life was at risk, would personally not perform an abortion to save his patient's life unless the likelihood that the patient will die is over 50%, and would favor banning abortions of pregnancies resulting from rape and incest. (Tr. 960-61, Test. Dr. Bowes.)

Dr. Bowes understands the "partial-birth abortion" procedure to mean the technique variously described by Drs. Haskell and McMahon and ACOG which "involves . . . partial delivery of a fetus who, at the time of that delivery, is still alive, and then some procedure or some act is performed by the physician that not only ends the delivery but also kills the fetus." Specifically, Dr. Bowes understands the procedure to involve dilating with laminaria; converting the fetus to a breech presentation when possible; delivering the fetus up to the head, at which point the cervix is not fully enough dilated to allow the head to pass; making

an incision in the fetal skull; and inserting a suction device into the fetal skull to suction out the brain of the fetus in order to diminish the size of the fetus's skull and to kill the fetus. (Tr. 915-16, Test. Dr. Bowes.)

Based on his limited abortion experience and his review of the Haskell and McMahon papers, the ACOG statement, and approximately 20 expert reports submitted by the plaintiffs in the nationwide litigation regarding the Partial-Birth Abortion Ban Act of 2003, Dr. Bowes opined that he has never "seen any situation where [he] perceived the need to use an intact D & E" or where he "perceived any advantage to using an intact D & E over other methods of abortion." (Tr. 919-20, Test. Dr. Bowes.)

xiv. DR. M. LEROY SPRANG

Dr. Sprang is a fellow of ACOG, the American College of Surgeons, and the American Society for Colposcopy and Cervical Pathology. He currently practices obstetrics and gynecology with a large private practice that is affiliated with the Northwestern University Medical School in Chicago. He has served as an instructor, associate professor, or assistant professor in clinical obstetrics and gynecology at Northwestern since 1975 and has been active in professional organizations since completion of his residency in obstetrics and gynecology in 1975. He earned his medical degree from Loyola Medical School in 1969. Dr. Sprang has delivered over 3,000 babies in his medical career and has handled 450-500 spontaneous abortions (or miscarriages) during all trimesters of pregnancy. He has performed D & Es and induction abortions in cases of fetal demise. Dr. Sprang recalls performing one abortion on a live fetus during a hysterotomy which was

necessary to save the life of a mother who was bleeding into her abdomen due to a placenta percreta, a condition in which the placenta grows through the uterine wall. (Tr. 1098-1106, Test. Dr. Sprang; Ex. 530.)

Dr. Sprang testified that he does not perform abortions on live fetuses because he went into medicine to preserve life and is uncomfortable causing fetal death. "In my office, patients [wanting an abortion of a live fetus] are referred. They go have the abortion, they come back and see me." (Tr. 1128, Test. Dr. Sprang.)

Dr. Sprang testified that after 20 weeks of gestation, every physician in his institution uses the induction method of abortion. (Tr. 1112, Test. Dr. Sprang.) Dr. Sprang uses misoprostol or laminaria for inductions through the 40th week of pregnancy. The shortest time period Dr. Sprang has observed for completion of a second-trimester induction abortion using misoprostol is four to six hours. (Tr. 1115, 1130, 1184, Test. Dr. Sprang.)

During his term as chairman of the board of the Illinois State Medical Society, Dr. Sprang became involved in the "[p]artial intact D & X" issue and collected information on the issue from physicians across the United States and in foreign countries. The Society introduced a resolution in the Illinois House to ban the "intact D & X" and, as an Illinois delegate to the American Medical Association ("AMA"), Dr. Sprang served on an AMA committee assigned to review the issue. Following issuance of the committee's report, the AMA "went to Congress in Washington" in support of HR 1122, which was a prior version of the Partial-Birth Abortion Ban Act of 2003 now before this court. (Tr. 1116-22, Test. Dr. Sprang.) According to Dr. Sprang,

who is currently the chairman of the Illinois delegation to the AMA, the AMA does not support the version of the law now before the court due to the AMA's traditional position of not supporting legislation that potentially criminalizes a physician's actions. (Tr. 1123-24, Test. Dr. Sprang.)

Dr. Sprang understands the intact D & X procedure to be that described by ACOG; that is, gradually dilating the cervix; performing an internal podalic version of the fetus from a vertex presentation to a breech presentation; extracting the fetus up to the head; piercing the fetal skull with scissors; removing the intracranial contents with a suction cannula; and then delivering the dead, but otherwise intact, fetus. Dr. Sprang understands that all physicians do not perform the procedure in the same way. (Tr. 1142-44, Test. Dr. Sprang.)

As Dr. Sprang interprets the medical literature and information he has gained through his work with the AMA, the intact D & E, or D & X, differs from the traditional disarticulation D & E in that more cervical dilation with repeated insertion of laminaria is required for the intact procedure and the intact procedure requires an internal podalic version which is a rarely used and seldom-recommended technique. (Tr. 1145-47, Test. Dr. Sprang.)

xv. DR. CURTIS COOK

Dr. Cook is a board-certified maternal-fetal medicine specialist who is also board-certified in obstetrics and gynecology. Dr. Cook graduated from the Indiana University School of Medicine in 1989; completed his four-year OB/GYN residency in Michigan in 1993; and in 1995 finished a fellowship in maternal-fetal medicine

at the University of Louisville School of Medicine where he completed additional training to learn to care for complicated pregnancies that may include fetal or maternal complications. In addition to his current position as associate director for maternal-fetal medicine at a large health care organization in western Michigan, Dr. Cook serves as an associate clinical professor in the Department of Obstetrics and Gynecology at the Michigan State College of Human Medicine. Dr. Cook's clinical practice is mainly comprised of referrals from other physicians, including women with surgical and medical complications, multiple gestation, and fetuses with abnormalities. Dr. Cook delivers between 100 and 200 babies per year and has delivered "[s]everal thousand" babies over the course of his career. (Tr. 1254-62, Test. Dr. Cook; Ex. 527.)

Dr. Cook is a member of the Association of Pro-Life OB/GYNs and has been involved in PHACT, Physicians' Ad Hoc Coalition for Truth, a group primarily operated by academic physicians with expertise in management of complicated pregnancies for the purpose of issuing "some factual and supported documents for educational purposes regarding specifics of [the intact D & E or D & X] procedure" in response to "medical misinformation that was being put forward regarding this procedure." (Tr. 1291-92, Test. Dr. Cook.)

As a maternal-fetal specialist, Dr. Cook treats both the mother and the fetus as patients. Part of Dr. Cook's practice involves performing medical procedures on living fetuses, including removing fluid or tissue from various fetal cavities for examination; inserting shunts into fetuses to bypass obstructions; and performing transfusions for anemia. (Tr. 1263, Test. Dr. Cook.)

Dr. Cook performs suction curettage up to 12 weeks for spontaneous miscarriages; he has in "rare instances" performed D & Es on expired fetuses in the second trimester; and he has not performed a D & E on a living fetus. Dr. Cook does not typically perform D & Es on living fetuses because "it's not [his] treatment of choice . . . . But if the case arose where [he] felt that it was in the mother's best health interest to end the pregnancy, and [he] could not do it safely as in the manner of a labor induction, then [he has] experience doing the D & E technique and would do that, if the clinical situation necessitated that, in order to preserve the health of the mother." Dr. Cook performs D & Es on fetuses that have already expired approximately once a year or less. (Tr. 1265 & 1270-75, Test. Dr. Cook.)

Dr. Cook testified on cross-examination that he has performed between three and five D & Es on expired fetuses and he has supervised under 20 D & Es. Of those 20 D & Es, less than 10 involved a living fetus at the beginning of the procedure. (Tr. 1375-76, Test. Dr. Cook.)

Dr. Cook does not perform elective abortions. Dr. Cook refers his patients to other physicians for D & Es when a fetus has been diagnosed with a nonlethal fetal abnormality and the patient wishes to terminate the pregnancy. If one of Dr. Cook's patients is carrying a fetus with a lethal fetal anomaly, but with no maternal medical complications related to the anomaly, Dr. Cook refers the patient to one of his partners for delivery and Dr. Cook handles aftercare and management of complications. (Tr. 1270, 1281, 1332-33, Test. Dr. Cook.) Dr. Cook does treat patients for complications related to abortion, such as perforation, bleeding, and infection. (Tr. 1283-84, Test. Dr. Cook.)

When pregnancy terminations prior to term are necessary after 16 weeks of gestation, Dr. Cook predominantly uses medical induction for several reasons. First, lethal fetal abnormalities are usually diagnosed via second-trimester ultrasound and are not presented to Dr. Cook's office until 16 to 20 weeks of gestation, and often later, and the D & E is a much more complicated and possibly riskier procedure beyond 20 weeks. Second, in fetal-abnormality cases, "we frequently want to have a complete fetus for pathologic evaluation after delivery," including an intact central nervous system, in order to gather information that may be relevant for family members or future pregnancies. Third, many of his patients have underlying medical complications that require delivery in "as controlled a situation as possible, using as normal a process as possible for the delivery." Finally, "many of the patients that we see are devastated by the unexpected outcomes of the fetuses, and want to be able to have whatever period of time they can with their baby, which would include generally being able to hold a baby that[ ] is intact as and normal appearing as possible." (Tr. 1264-65, 1271, 1278-79, Test. Dr. Cook.)

By using prostaglandins, Dr. Cook claims that physicians can "get medical inductions down to pretty reliable 12-hour, on average, interval of time or less and do it in a manner that minimizes risk for both maternal complications and still allows, if it's appropriate, adequate outcome for the fetus." (Tr. 1369, Test. Dr. Cook.)

Dr. Cook estimates that he performs inductions for fetuses less than 23 weeks one to two times per month and inductions after 23 weeks once per week. (Tr. 1281-82, Test. Dr. Cook.) Dr. Cook has performed inductions

prior to viability on living fetuses that either die at some point during the process or are "born with signs of life but [are] not able to survive, ultimately, just because of the early gestational age." (Tr. 1282-83, Test. Dr. Cook.) Dr. Cook has never injected a fetus with digoxin or KCl in the course of an induction procedure. (Tr. 1429-30, Test. Dr. Cook.) Dr. Cook agrees that women with viral diseases like hepatitis and HIV would face greater risks with such injections. (Tr. 1431, Test. Dr. Cook.)

When Dr. Cook terminates a pregnancy for maternal health reasons previability, he may not monitor the fetus and he is less concerned about how well the fetus may tolerate vaginal delivery. For such pregnancy terminations involving viable fetuses, "it is always our preference to try to deliver vaginally by utilizing . . . a normal laboring process because it's most physiologic and generally best tolerated by the mother." If the fetus has complications that would prevent it from tolerating a vaginal delivery, Dr. Cook "would then do an operative delivery such as a cesarean delivery in order to facilitate maternal recovery and to allow the least traumatic method of delivery of the fetus." (Tr. 1302-03, Test. Dr. Cook.)

Dr. Cook became aware of the intact D & E, or D & X, procedure when it was "proposed through the U.S. Congress as a procedure that would be worthy of being evaluated and potentially banned, if, indeed, it turned out to have some of the potential risk or concerns that subsequently have come to light." As Dr. Cook understands it, the procedure—also referred to as "partial-birth abortion"—consists of the following:

> I understand it to refer to the procedure basically described by Dr. Haskell as a D & X procedure; Dr. McMahon, as an intact D & E procedure, and others as the intact D & X procedure, the hallmark of which is overt dilation of the cervix, potentially internal podalic version or turning a fetus to a breech position, grasping the fetus, pulling it down through the dilated cervix to the level of the after[-]coming head, such that all the fetus is delivered but the head. And then doing some sort of destructive and decompression procedure on the fetal head to allow passage of the remainder of the baby.

(Tr. 1284-85, Test. Dr. Cook.) Dr. Cook understands that the intact D & E procedure may vary in how the cervix is dilated, how much the cervix is dilated, whether or not the fetus is converted to a breech position, and how the fetal skull is decompressed. (Tr. 1297, Test. Dr. Cook.)

Dr. Cook views the intact D & E, or D & X, procedure to be distinct from the D & E because the intact D & E is performed at a later gestational age (after 20 weeks) on a larger fetus; involves much more cervical dilation and more intrauterine manipulation of the fetus; and it involves a "decompression procedure of the fetal head that is unique in its form of aspirating out the brain contents." (Tr. 1286-87, Test. Dr. Cook.) In contrast, the D & E involves dismembering the fetus inside the uterus with instruments and removing the pieces through an adequately dilated cervix. (Tr. 1294-95, Test. Dr. Cook.)

Dr. Cook was asked to, and did, testify before Congress regarding the potential banning of the intact D & E or D & X procedure during a special joint hearing of

the House and Senate Judiciary Committees in 1997 and before a House Subcommittee in 2003. (Tr. 1289, Test. Dr. Cook.) Dr. Cook "was asked . . . to give advice on how we could write a better Bill [after *Carhart*], how we could most narrowly define the procedure, and so [he] put forward several recommendations, some of which became incorporated, some of which did not." (Tr. 1447, Test. Dr. Cook.) In an effort to narrow the scope of the Act, Dr. Cook recommended that the Act be limited to procedures performed after 20 weeks. He also suggested including anatomic landmarks and "intentional or volitional destructive procedures" and excluding normal vaginal deliveries. (Tr. 1447-48 & 1451, Test. Dr. Cook.) Dr. Cook has also testified or submitted declarations in support of statutes limiting partial-birth abortions in litigation in Michigan, Missouri, Wisconsin, and Alaska. (Tr. 1448 & 1450, Test. Dr. Cook.)

xvi. DR. ELIZABETH SHADIGIAN

Dr. Shadigian is a board-certified obstetrician and gynecologist who is also a full-time faculty member at the University of Michigan. She received her medical degree from the Johns Hopkins School of Medicine in 1990, completed her OB/GYN residency at the Franklin Square Hospital Center in Baltimore and Johns Hopkins in 1994, and became a full-time clinical assistant professor of obstetrics and gynecology at the University of Michigan that same year. She is a fellow of ACOG and is a reviewer for several national medical journals. (Tr. 1486-90, Test. Dr. Shadigian; Ex. 529.)

Dr. Shadigian has performed D & Cs, D & Es, and medical induction of labor to terminate pregnancies prior to full term. Dr. Shadigian testified that with the

exception of some pregnancy terminations that were necessary to treat maternal health complications, "all the babies that . . . [Dr. Shadigian has] . . . performed abortions on were dead by the time" she performed the procedure. (Tr. 1493-94, Test. Dr. Shadigian.) Dr. Shadigian does not perform abortions on live fetuses unless "it's [her] belief the mother will die," a situation that has occurred approximately 20 to 40 times in her career. (Tr. 1564-65, Test. Dr. Shadigian.) In those cases, she used the induction method of abortion to terminate the pregnancy. (Tr. 1565, Test. Dr. Shadigian.)

Dr. Shadigian performs D & Cs from approximately 5 to 12 weeks of pregnancy, a procedure which involves dilating the cervix and using sharp or suction curettage to remove the uterine contents, including the fetus, placenta, and fluid. (Tr. 1493, Test. Dr. Shadigian.) She has performed "hundreds" of D & Cs on expired fetuses and has observed the procedure being performed on living fetuses. (Tr. 1495, Test. Dr. Shadigian.) Dr. Shadigian uses mechanical dilation of the cervix for her D & C and vacuum-aspiration procedures. (Tr. 1574, Test. Dr. Shadigian.)

Dr. Shadigian testified that she performs D & Es in the second trimester, a procedure which involves dilation of the cervix over a series of days with laminaria or osmotic dilators; use of medicine such as misoprostol to dilate and prepare the cervix; removal of the laminaria and possible use of additional dilators at that time; placement of traction onto the cervix to straighten it out; and use of instruments inside the uterus to facilitate the fetus's disarticulation and removal. (Tr. 1493-94, Test. Dr. Shadigian.) Dr. Shadigian has assisted with 30 to 50 D & Es on expired fetuses during

residency, performed 10 to 20 D & Es on expired fetuses since she came to the University of Michigan in 1994, and has observed D & E procedures being performed on live fetuses up to 20 or 22 weeks of gestation. Of the D & Es she has performed, Dr. Shadigian has completed approximately 8 to 10 D & Es on 17- to 19-week fetuses at the University of Michigan and on 20-week fetuses during residency. Under normal circumstances, Dr. Shadigian estimates that surgical removal of a fetus during a D & E procedure takes approximately 30 minutes to 2 hours. (Tr. 1495- 96, 1565, 1580-81, Test. Dr. Shadigian.)

Dr. Shadigian most commonly uses medical induction at 20 weeks of gestation and up. Dr. Shadigian performs medical inductions on fetuses prior to term on a weekly basis, but it is "more rare" for her to use induction prior to viability. Dr. Shadigian testified that medical induction involves placement of medications in the woman's uterus, vagina, or mouth to induce contractions and begin the physiological process of labor. (Tr. 1493-97 & 1499, Test. Dr. Shadigian.) Dr. Shadigian has most commonly used the induction method to terminate pregnancies prior to viability for chorioamnionitis[58] and preeclampsia. (Tr. 1499-1500, Test. Dr. Shadigian.)

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[58] "Chorioamnionitis" is an "[i]nfection involving the chorion, amnion, and amniotic fluid; usually the placental villi and decidua are also involved." *Stedman's Medical Dictionary* 343 (ed. 2000). *See also* Ex. 124, Test. Dr. Hammond 588-89 (chorioamnionitis is "an infection of the fetal membranes and also the amniotic fluid"). Dr. Shadigan defines chorioamnionitis, perhaps more broadly, as "an infection of the membranes, the placenta, the baby, the uterus, and . . . any variation thereof." (Tr. 1499-1500, Test. Dr. Shadigan.)

Dr. Shadigian treats abortion complications such as infection, blood loss, uterine scar tissue, and premature births following induced abortions. She has developed an interest in treating such complications because "[i]t has been estimated up to 43% of American women will have an elective abortion or a medically necessary abortion by the time they are age 45." (Tr. 1505-07, Test. Dr. Shadigian.)

Dr. Shadigian has performed a systematic literature review regarding the intact D & E or D & X, defined as dilation of the cervix over several days to accomplish an adequate amount of dilation; instrumental conversion of the fetus to a breech presentation; delivery of the fetus up to its head; admission of instruments into the base of the fetal skull; and extraction of the contents of the fetal skull in order to facilitate delivery of the head. After her review of the Act, various definitions of the intact D & E procedure, and expert declarations, Dr. Shadigian thinks there are "several variations" of the procedure, and instrumental conversion of the fetus is not a necessary part of the definition. (Tr. 1510-12, Test. Dr. Shadigian.)

xvii. DR. STEVEN CLARK

Dr. Clark is a maternal-fetal medicine specialist for the Inner Mountain Health Care facility ("LDS Hospital"), a private LDS community hospital in Salt Lake City, Utah. He is a professor of obstetrics and gynecology at the Utah School of Medicine, and in addition to didactic teaching, provides clinical training to medical students, residents, and fellows at the Inner Mountain Health Care facility and the University Hospital. Currently, half his professional time is devoted to the care and treatment of women with com-

plicated pregnancies, with the remainder spent in formal teaching, chairing the quality assurance committee of the LDS Hospital, and performing research. (Ex. 891, Test. Dr. Clark 2270-71, 2275 & Sub-Ex. A.)

Dr. Clark graduated from the University of Wisconsin Medical School in 1979, completed a residency in obstetrics and gynecology in 1983, and completed a fellowship in maternal-fetal medicine in 1985, both at the University of Southern California. He is board-certified in obstetrics and gynecology and in the subspecialty of maternal-fetal medicine. He is a member of ACOG and the Society of Maternal Fetal Medicine, is a grant application reviewer for the National Institutes of Health, and has served on several professional committees in the area of maternal complications during pregnancy. Dr. Clark has published 173 articles (more than half of which were peer-reviewed), including several book chapters, and was the lead editor of *Critical Care Obstetrics*, a textbook initially published in the late 1980s and currently in its fourth edition. His research is focused on caring for the critically ill pregnant woman and her fetus, complications of pregnancy, and vaginal birth after cesarean section. He has never written or researched the methods or techniques of performing abortions. Although he is ethically and morally opposed to elective abortion, Dr. Clark has not previously been involved in cases challenging statutes banning partial-birth abortion. Dr. Clark has testified or given a deposition as a medical expert in malpractice cases 160 times over the last four years. None of these depositions involved abortion techniques. (Ex. 891, Test. Dr. Clark 2270-90, 2397, 2399-2402 & Sub-Ex. 891A.)

Dr. Clark performs D & Cs in the first trimester, labor induction to term, and dismemberment D & Es up to 20 weeks. He performs abortions only when medically necessary. (Ex. 891, Test. Dr. Clark 2297-98.)

Over the course of his career, Dr. Clark has performed a dozen first-trimester abortions on live fetuses; less than 20 labor-induction abortions; and "[a]t most, a dozen" D & Es on live fetuses up to 20 weeks of gestation due to lack of experience. Dr. Clark characterizes the instances where an abortion of a live fetus was necessary for the mother's sake as "very, very rare." The last D & E Dr. Clark performed on a live fetus was one to two years ago. In cases of spontaneous abortion (miscarriage or fetal death), Dr. Clark has performed hundreds of procedures, with D & C being the most common and labor induction the second most common. (Ex. 891, Test. Dr. Clark 2299, 2302, 2399.)

(a) D & E

Dr. Clark describes the D & E as a process involving cervical dilation, introducing an instrument into the uterus, pulling the fetus out in pieces, and removing the placenta with forceps. (Ex. 891, Test. Dr. Clark 2301.)

In his practice, abortion is so infrequent that Dr. Clark has no experience performing D & Es after 20 weeks of gestation, and all women at that gestational age who choose D & E are referred to the same colleague so that a doctor in their group can acquire some base of experience. (Ex. 891, Test. Dr. Clark 2407.)

Dr. Clark testified that when the mother is going to die unless the fetus is aborted, the mother is advised that if a D & E is performed, the fetus will be pulled out in pieces and will die. (Ex. 891, Test. Dr. Clark 2302-03.)

To dilate the cervix prior to performing a D & E, Dr. Clark uses two sequences of laminaria, and each time he places as many laminaria in the cervix as he can without causing trauma. In his opinion, laminaria are a gentler method of cervical dilation than the use of mechanical dilators and appropriate use of laminaria does not increase the risk of pregnancy loss. Dr. Clark has used mechanical dilators in addition to laminaria. (Ex. 891, Test. Dr. Clark 2413-14.)

Dr. Clark has "read about" intact D & E in the McMahon and Haskell articles, the pre-publication Chasen article, and the expert disclosures given in this litigation, but he has never seen it performed, talked to anyone who performs them concerning the technique, and has never performed an intact D & E. He understands the intact D & E to include cervical dilation, breech presentation and removal of the fetus until the head is lodged at the cervical os, putting a hole in the fetus's head, suctioning out the fetal brain, removing the fetus intact, and removing the placenta. (Ex. 891, Test. Dr. Clark 2307-08, 2310, 2399.)

(b) LABOR INDUCTION

According to Dr. Clark, prostaglandins can be used to induce labor. There are two classes of prostaglandins: E prostaglandins and F prostaglandins. Dr. Clark testified that some patients experience complications from prostaglandin administration, but even when one class of prostaglandin causes problems, the other class of prostaglandin can be safely used. Misoprostol is an E prostaglandin and is commonly used for labor-induction abortion. (Ex. 891, Test. Dr. Clark 2304-05.)

Dr. Clark stated that misoprostol was developed to treat ulcers, but is widely used to induce preterm and

term labor and delivery. It has replaced ritadrin for inducing preterm labor. Ritadrin has not been used for about 10 years. (Ex. 891, Test. Dr. Clark 2305-06.)

xviii. DR. CHARLES LOCKWOOD

Dr. Charles Lockwood is a maternal-fetal medicine specialist who has been the Chairman of the Department of Obstetrics, Gynecology and Reproductive Services at the Yale University School of Medicine since 2002. Part of Dr. Lockwood's duties at Yale include maintaining the quality of clinical care at the Yale New Haven Hospital. From 1995 to 2002, Dr. Lockwood served as Chairman of the Department of Obstetrics and Gynecology at the New York University School of Medicine where he chaired or directed the obstetrics and gynecology departments at two hospitals. (Ex. 528; Tr. 1639-42, Test. Dr. Lockwood.) In his last year at NYU, approximately 900 abortions were performed there, approximately one-third of which were second-trimester procedures. Of those second-trimester abortions, approximately 25 to 35% were intact D & Es. While Dr. Lockwood did not know intact D & Es were being performed in his department during his time at NYU, he would have allowed the procedure to be performed if he had known. It would have been a "violation of [his] obligation" to have allowed any unsafe procedures to be performed in his department at NYU. (Tr. 1666, 1744-45, 1764-65, Test. Dr. Lockwood.)

Dr. Lockwood received his medical degree from the University of Pennsylvania School of Medicine in 1981; finished his residency in obstetrics and gynecology at Pennsylvania Hospital in 1985; completed a fellowship in maternal-fetal medicine at the Yale University School of Medicine in 1987; and concluded his post-

doctoral fellowship in coagulation at the Mount Sinai School of Medicine in New York in 1991. He is board-certified in obstetrics and gynecology with a special certification in maternal-fetal medicine[59] and is currently licensed to practice medicine in New Jersey, New York, and Connecticut. Dr. Lockwood currently maintains an active medical practice in maternal-fetal medicine and conducts research on a variety of topics. Approximately 150 of Dr. Lockwood's studies have been peer-reviewed and he has served as a peer reviewer for many medical journals. (Ex. 528; Tr. 1642-45, Test. Dr. Lockwood.)

Dr. Lockwood was responsible for creating a "reproductive choice service" at New York University and Bellevue Hospital that would train residents in abortion techniques and would conduct research in abortion and contraception. (Tr. 1661-63, Test. Dr. Lockwood.) The program director had significant discretion regarding what abortion procedures would be performed at NYU, but as viability approached in any given case, the ethics committee at Bellevue Hospital was involved in "adjudicating whether the abortion would be appropriate." (Tr. 1661-64, Test. Dr. Lockwood.) Currently, NYU provides medical abortions by methotrexate, manual vacuum aspiration, dilatation and aspiration, suction curettage, D & E, and D & X. (Tr. 1664, Test.

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[59] Dr. Lockwood describes this specialty as "the field of study and clinical activity in obstetrics and gynecology that deals with complicated obstetrical cases, including pregnancies complicated by maternal medical illnesses and obstetrical complications such as premature labor, recurrent miscarriage, preeclampsia, and a variety of other conditions as well as the fetus. And that includes providing diagnosis and therapy for the fetal patient." (Tr. 1642-43, Test. Dr. Lockwood.)

Dr. Lockwood.) Dr. Lockwood is planning to develop a family planning and reproductive choice program at Yale University that will conduct academic research and publish peer-reviewed studies. If the director of that program wishes, Dr. Lockwood will allow the intact D & E procedure to be performed and taught at Yale. (Tr. 1666-67 & 1746, Test. Dr. Lockwood.)

Dr. Lockwood does not perform abortions on live fetuses. (Tr. 1647, Test. Dr. Lockwood.) He has observed approximately ten D & Es up to 20 weeks of gestation during his residency, three to four per year during his fellowship, and one to two per year at Mt. Sinai, NYU, and Yale. Dr. Lockwood performs dilation and aspiration or suction curettage after fetal death up to 12 to 13 weeks of gestation; has managed many patients with complications of surgical and medical abortion; and has performed ultrasounds during abortions in an effort to avoid maternal injury. (Tr. 1652-53 & 1658, Test. Dr. Lockwood.) Dr. Lockwood performed medical-induction abortions more than 40 times during residency and he continues to do so in cases of nonliving fetuses. (Tr. 1658-59, Test. Dr. Lockwood.) He has treated women for complications after an abortion, including retained placental fragments, uterine perforation, and chorioamnionitis. (Tr. 1660-61, Test. Dr. Lockwood.)

Dr. Lockwood's suction curettage procedure includes premedicating the patient, generally with Motrin; placing a sterile speculum in the vagina; sterilizing the cervix; placing a tenaculum on the cervix; administering a paracervical block; inserting a suction curette in the uterus; and evacuating the contents of the uterus. Dr. Lockwood confirms with ultrasound that the uterus contains no residual products and sends the patient

home with pain relief and antibiotics if necessary. The tissue removed from the uterus is often then sent for karyotypic analysis to evaluate whether a chromosomal abnormality caused the miscarriage. (Tr. 1653-54, Test. Dr. Lockwood.)

Dr. Lockwood describes the D & E procedure as placement of laminaria, with or without prostaglandin or misoprostol, for two to three days depending upon the gestational age of the fetus; use of premedication and a paracervical block or general anesthesia; manual examination to determine the position of the cervix; insertion of a speculum; additional mechanical dilation if needed; optional ultrasound to determine the fetus's length; rupture of the membranes if necessary; and removal of the fetus. The fetus is removed in parts by placing a clamp or forcep~~s on~~ a fetal part and "achieving counter-traction by the cervix so that there is pressure, there is a vector force in that direction . . . . And that, in turn, creates a point of fracture . . . in the fetal tissue." Ultrasound may then be used to determine if residual parts remain in the uterus. The placenta is then removed by suction curettage in most cases and pitocin is used to minimize bleeding. After counseling on contraception, the patient is then released with antibiotics, pain relief, and instructions for follow-up care. (Tr. 1654-57, Test. Dr. Lockwood.)

According to Dr. Lockwood, ultrasound-guided imaging during D & E procedures is "very, very important" because "any time we manipulate anything inside the uterus, if we don't use ultrasound imaging, it makes it a more complicated procedure, potentially a more risky procedure." In the case of D & Es, "[r]ather than blindly trying to identify fetal parts, and hoping that you're not clamping the uterus, the use of ultrasound

allows one to carefully place various clamps directly on the fetus and remove the fetus with some assurety that you are not grasping the uterus." (Tr. 1670-71, Test. Dr. Lockwood.)

Dr. Lockwood understands there are "multiple definitions" of the intact D & E or D & X, but he defines it as cervical ripening for some time, perhaps for several days; internal podalic version[60] unless the fetus is already in a breech position; delivery of the fetus until the head abuts the cervix; and evacuation of the uterine contents, which often will require "the intracranial . . . tissue to be removed to collapse the [fetal] skull to allow delivery." As compared with the traditional D & E procedure, the intact D & E involves "a greater degree of cervical dilatation, and, therefore, serial placement of laminaria and/or . . . Cytotec or Misoprostol" are used. (Tr. 1664-65 & 1673-74, Test. Dr. Lockwood.)

Dr. Lockwood testified that both the intact D & E and traditional D & E involve dilation of the cervix. In some cases, the cervix will dilate more than in others, even with the same cervical preparation. (Tr. 1757, Test. Dr. Lockwood.)

Dr. Lockwood stated that second-trimester labor induction for termination of pregnancy has "changed dramatically over the last 25 years," going from intraamniotic injections of hypertonic saline to use of laminaria and misoprostol or Cytotec. According to Dr. Lockwood, modern labor-induction abortions often involve the use of laminaria, followed by admission to

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[60] Dr. Lockwood interprets the Act to prohibit procedures that do not involve conversion of the fetus to a breech position. (Tr. 1751, Test. Dr. Lockwood.)

the hospital and removal of the laminaria. Some physicians administer antibiotics at that point and most give an epidural for pain relief. Misoprostol suppositories are then used for two to four hours. Depending upon the dose of misoprostol used, the induction procedure usually lasts from 12 to 24 hours with a 5% risk of retained placenta. (Tr. 1676 & 1710, Test. Dr. Lockwood.)

Dr. Lockwood noted that abortion procedures that begin as inductions sometimes fail. Specifically, in performing a previability induction abortion, the fetus sometimes partly expels in a breech position, but the patient experiences excess bleeding before the head is delivered. In that case, one of the options in the physician's armamentarium "would be to compress the calvarium with forceps," even after the fetus has shown signs of life. Dr. Lockwood believes that the physician performing an induction abortion knows at the outset of the procedure that such circumstances may occur and might necessitate such instrumentation. (Tr. 1758-59, Test. Dr. Lockwood.)

Dr. Lockwood testified that when a physician begins a previability D & E, intending to remove the fetus in large pieces but not specifically intending to do an intact D & E, the fetus may be pulled through the cervix until the after-coming head is obstructed. According to Dr. Lockwood, one of the physician's options in this circumstance "would be to compress the calvarium with forceps in order to remove the fetus just as in the induction," even though the fetus had shown signs of life before such compression. The physician performing the D & E may know at the outset of the procedure that these circumstances may occur and

might necessitate such instrumentation. (Tr. 1759, Test. Dr. Lockwood.)

Dr. Lockwood believes that patient preference regarding length of the procedure and comfort level are important considerations in choosing an abortion procedure, and barring contraindications to a certain procedure, a woman should be given the option of having an induction abortion or a surgical abortion after 20 weeks and before viability. (Tr. 1747-48, Test. Dr. Lockwood.)

xix. ACOG

A Statement of Policy issued by the executive board of the American College of Obstetricians and Gynecologists defines the "intact dilatation and extraction" procedure as containing all four of the following elements:

1. deliberate dilatation of the cervix, usually over a sequence of days;
2. instrumental conversion of the fetus to a footling breech;
3. breech extraction of the body excepting the head; and
4. partial evacuation of the intracranial contents of a living fetus to effect vaginal delivery of a dead but otherwise intact fetus.

(Ex. 5, at 2.) The policy describes the "intact D & X" as one method of terminating a pregnancy after 16 weeks, but one's "physician, in consultation with the patient, must choose the most appropriate method based upon the patient's individual circumstances." (Ex. 5, at 2.)

b. INDICATIONS AND CONTRAINDICATIONS

Many of the doctors also testified regarding maternal and fetal conditions that, in their opinion, may or may not necessitate an abortion or a particular type of abortion. That testimony is described below.

i. MATERNAL INDICATIONS AND CONTRAINDICATIONS

Dr. Chasen testified that a second-trimester abortion may be required to protect a woman's health or save her life. For example, a dilated cervix or ruptured membranes in the second trimester pose a substantial risk of infection. Continuing the pregnancy can lead to infection throughout the body (sepsis) and death. (Ex. 121, Test. Dr. Chasen 1609.) Dr. Broekhuizen stated that sometimes the issue faced is not the woman's life, but her long-term health, and the Act does not include an exception for a mother's health. (Ex. 120, Test. Dr. Broekhuizen 558.)

According to Dr. Clark, it is rare that terminating a pregnancy is necessary for the mother's health, averaging less than 1 in 50,000 cases per year during the second trimester. (Ex. 891, Test. Dr. Clark 2314-15.) Dr. Doe performs a "very small percentage" of abortions for maternal physical health reasons, characterizing such pregnancy terminations as "rare." Dr. Doe does not recall terminating a pregnancy for maternal health reasons in 2003 or 2004. (Tr. 103-04, Test. Dr. Doe.) Similarly, only a small number of Dr. Westhoff's second-trimester patients seek abortions for maternal health reasons. (Ex. 126, Test. Dr. Westhoff 805-07.)

In contrast to Dr. Clark's testimony, Dr. Lockwood stated that approximately 1 to 5 per 1,000 pregnancies must be terminated prior to viability due to a physical health condition of the mother. (Tr. 1682-87, Test. Dr. Lockwood.)

If the mother's health is truly at risk, Dr. Clark stated that the need to terminate the pregnancy generally arises in the first trimester, although preeclampsia may very rarely arise in the second trimester. (Ex. 891, Test. Dr. Clark 2316-18.) Dr. Paul testified that abortions for maternal or fetal indications are more likely after the first trimester of pregnancy. (Ex. 125, Test. Dr. Paul 21-22.)

According to physicians who testified at trial, some of the "maternal indications" for which abortions are performed include the physical and mental health condition of the mother, such as cancer; left or right heart failure and other heart conditions; thromboembolism and pulmonary embolism (blood clots in the legs and lungs, respectively); hyperemesis gravidarum (serious nausea and vomiting induced by pregnancy); hypertension or severe preeclampsia[61]; HELLP syndrome, a severe complication of preeclampsia[62]; intracranial hemorrhage; infection; severe, uncontrolled diabetes; renal conditions; liver disease; substance

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[61] "Preeclampsia" is "[d]evelopment of hypertension with proteinuria or edema, or both, due to pregnancy." *Stedman's Medical Dictionary* 1437 (27th ed. 2000).

[62] HELLP syndrome is "a variation of preeclampsia or toxemia which HELLP stands for hemolysis, breakdown of red blood cells, low platelet count, elevated liver function test, putting it in that order. It's very serious. You can have liver failure. You can have hemorrhage, seizures, and it's frequently associated with small fetuses . . . ." (Tr. 1694-95, Test. Dr. Lockwood.)

abuse; mental retardation; depression; and schizophrenia. (Tr. 31-32, Test. Dr. Doe; Tr. 600, Test. Dr. Carhart; Tr. 213, Test. Dr. Fitzhugh; Tr. 501, Test. Dr. Knorr; Tr. 315, Test. Dr. Vibhakar; Tr. 1301-02, Test. Dr. Cook; Tr. 1514-15, Test. Dr. Shadigian (maternal health conditions potentially necessitating termination of previable pregnancy include chorioamnionitis and severe preeclampsia); Tr. 1677-78 & 1688-89, Test. Dr. Lockwood; Ex. 121, Test. Dr. Chasen 1609-10 (woman may develop preeclampsia, which may be life-threatening, or heart disease, which may be life- or health-threatening); Ex. 120, Test. Dr. Broekhuizen 495-96 (health problems existing before a pregnancy that may prompt a woman to choose to end her pregnancy include cardiopulmonary disease (e.g., pulmonary hypertension where pregnancy is associated with a 30 to 40% mortality rate), coronary heart disease, end-stage renal disease, and liver disease; health problems arising during pregnancy that may cause a woman to end the pregnancy include cancer, the treatment for which may be less effective during pregnancy or may cause birth defects or developmental problems in the fetus); Ex. 125, Test. Dr. Paul 12-13 & 15-16; Ex. 891, Test. Dr. Clark 2318-19, 2362-63, 2367-68 (most common medical condition requiring termination of pregnancy is heart disease; cancer, hypertension, and disorders of other organ systems can also be life-threatening but are much less common; thromboembolism is common complication of pregnancy and in most patients, the pregnancy need not be terminated, but in some circumstances terminating the pregnancy may be required to save the woman's life; if the woman has been placed on anticoagulants to treat thromboembolism, risk of bleeding makes labor induction the preferred second-trimester abortion procedure).)

Dr. Paul identified maternal health conditions specific to or more common in pregnancy which she believes provide a basis for choosing or needing an abortion: preeclampsia, chorioamnionitis, thromboembolism, and pulmonary embolism. (Ex. 125, Test. Dr. Paul 12-13 & 15-16.) According to Dr. Paul, underlying maternal health conditions which are exacerbated by pregnancy and provide a basis for choosing or needing an abortion include diabetes and heart conditions. Specifically, as pregnancy progresses, hormonal changes make it very difficult to control blood sugar levels. Dangerously low blood sugars can lead to seizures, and dangerously high blood sugar levels may cause coma. (Ex. 125, Test. Dr. Paul 17; *see also* Ex. 891, Test. Dr. Clark 2375-76 (proliferative retinopathy is complication of diabetes characterized by changes in retina which can cause blindness; for unknown reasons, in some pregnant women with underlying retinopathy, the condition of retina rapidly deteriorates during pregnancy; woman may elect to terminate pregnancy to stop this deterioration and prevent permanent blindness; if the woman so elects, either labor induction or dismemberment D & E are appropriate second-trimester abortion techniques).) Dr. Paul testified that as a pregnancy progresses, the woman's blood volume nearly doubles, her heart rate accelerates, and the heart is working harder. She stated that these physiological changes of pregnancy are very taxing on women with underlying heart conditions, and the increased pressures in the heart can back up into the lungs, causing pulmonary edema (fluid in the lungs) or heart failure. (Ex. 125, Test. Dr. Paul 16-17.)[63]

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[63] Dr. Clark opined that while it is true that women in the second trimester of pregnancy have a higher overall blood volume

Dr. Clark testified that lung disease is not a maternal health condition requiring pregnancy termination. According to Dr. Clark, the predominant lung disease in pregnant women is asthma, and asthma is not a reason to terminate a pregnancy. (Ex. 891, Test. Dr. Clark 2337-38.) "All other forms of lung disease are so small as to be essentially not worth considering." (Ex. 891, Test. Dr. Clark 2334-35.) In Dr. Clark's opinion, F prostaglandins may cause bronchiospasm in a woman with asthma, but E prostaglandins (such as misoprostol and oxytocin) do not cause bronchiospasm. Therefore, Dr. Clark concluded that either labor induction with misoprostol or oxytocin or a dismemberment D & E can be safely performed to terminate a second-trimester pregnancy in a woman with asthma. (Ex. 891, Test. Dr. Clark 2335-38.)

Dr. Clark also believes that auto-immune disorders and prior organ transplantation (except in the case of toxemia of pregnancy) are not reasons to terminate a pregnancy. (Ex. 891, Test. Dr. Clark 2349.)

Some of the witnesses before the court testified that hospitalization is preferable for some abortions involving certain maternal health conditions. According to Dr. Doe, hospitalization would be advisable for abortions performed for maternal health reasons when the patient has a systemic illness requiring hospital management like a bleeding, pulmonary, or heart problem; a severe psychiatric or psychological illness that prevents the patient from traveling back and forth during the course of the procedure; or an obstetrical or gynecologi-

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than non-pregnant women, this change in volume is not relevant in deciding whether labor induction or a D & E is the safer abortion procedure. (Ex. 891, Test. Dr. Clark 2326-28.)

cal complication such as placenta previa or placenta previa accreta. Hospitalization in such circumstances would allow more rapid access to consultants and facilities, such as blood transfusion equipment and supplies. (Tr. 109-10, Test. Dr. Doe.) Dr. Knorr sometimes refers his patients to a hospital for an abortion if the patient has an unstable medical condition like hyperthyroidism, a heart condition, or uncontrolled diabetes or hypertension for which the patient has not been medically cleared by an outside doctor to have the abortion performed in Dr. Knorr's clinic. (Tr. 550-51, Test. Dr. Knorr.)

Dr. Lockwood testified that when a maternal complication necessitates early termination of a pregnancy, the method used to terminate the pregnancy varies depending upon whether the fetus is previable or postviable. (Tr. 1678, Test. Dr. Lockwood.) For example, if the fetus is viable and the mother or fetus is gravely ill, a cesarean section would be used. In the absence of grave illness, a fetus that is vertex would be delivered by labor induction. (Tr. 1680, Test. Dr. Lockwood.) According to Dr. Lockwood,

> cesarean section is a procedure done over a million times a year in the United States. We have enormous experience with it. It is remarkably safe, and is a very reasonable approach to delivery, particularly near term. And we have also got extensive experience with induction of labor, and those are very safe and reasonable alternatives for terminating the pregnancy.

(Tr. 1681, Test. Dr. Lockwood.)

Several physicians testifying in this case expressed preferences in abortion method for various maternal

health conditions. Dr. Frederiksen believes that pregnancy termination is necessary for women with chorioamnionitis and severe preeclampsia, and an abortion by either induction or D & E may be performed. (Ex. 123, Test. Dr. Frederiksen 1228-29.) Dr. Frederiksen also opined that pregnancy termination may be necessary for women with pulmonary hypertension, and either an intact or a dismemberment D & E may be performed. (Ex. 123, Test. Dr. Frederiksen 1229.) However, Dr. Clark testified that when the mother's blood pressure cannot be controlled, barring any associated clotting problems, D & E is the preferred second-trimester abortion method because it is faster. (Ex. 891, Test. Dr. Clark 2408-09.) An induction or D & E abortion may be performed on a woman with renal disease, according to Dr. Frederiksen. (Ex. 123, Test. Dr. Frederiksen 1229-30.) In Dr. Clark's opinion, either a dismemberment D & E or labor induction can be performed to abort a fetus when the woman is experiencing a maternal medical complication in the second trimester. He stated that in some cases, one procedure may be preferred over the other, but both are generally safe. (Ex. 891, Test. Dr. Clark 2313-14.) If a woman with a transplanted organ elects to have an abortion, either labor induction or dismemberment D & E are appropriate second-trimester abortion techniques in Dr. Clark's opinion. (Ex. 891, Test. Dr. Clark 2349 & 2374-75.)

ii. FETAL INDICATIONS

(a) TYPES OF ANOMALIES

Rebecca Baergen, M.D., is a board-certified clinical pathologist, professor of clinical pathology and laboratory medicine, attending pathologist, and chief of

perinatal and pediatric pathology at the Joan and Sanford I. Weill Medical College and Graduate School of Cornell University. She specializes in perinatal, placental, and gynecological pathology which includes the study of fetal, placental, and female reproductive organ abnormalities. (Ex. 119, Test. Dr. Baergen 1089-92, 1093 & Sub-Ex. 119A.)

Dr. Baergen defines a fetal anomaly as an external or internal abnormality of the fetus. According to Dr. Baergen, a fetal syndrome is characterized by a collection of specific abnormalities that typically occur together and, when seen in combination, suggest a particular disease process or etiology. (Ex. 119, Test. Dr. Baergen 1098-99.)

Dr. Broekhuizen testified that the diagnosis of chromosomal abnormalities is often performed early in pregnancy with chorionic villus sampling or DNA analysis, especially when there is a known increased risk of fetal genetic problems, and structural fetal anomalies are often diagnosed by ultrasound later in the pregnancy.[64] In the geographic area of Wisconsin,

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[64] Dr. Paul stated that ultrasound is the most common way to assess fetal health; is usually performed between 13 and 20 weeks; and is very good, but not 100% accurate, at diagnosing apparent birth defects such as anencephaly and the absence of kidneys. (Ex. 125, Test. Dr. Paul 19-20.) Dr. Chasen testified that invasive tests to detect genetic conditions include chorionic villus sampling at the end of the first trimester and amniocentesis in the second trimester (typically at 15 to 20 weeks of gestation). (Ex. 121, Test. Dr. Chasen 1550-51.) According to Dr. Paul, the latter two procedures are not routinely performed on pregnant women because there are medical risks associated with the procedures which must be balanced against the very low incidence of fetal anomalies in the general population. However, women with a family history of genetic abnormality, older women, and women whose ultrasounds

for example, most fetal anomalies are diagnosed after 16 weeks. (Ex. 120, Test. Dr. Broekhuizen 498-99; *see also* Ex. 125, Test. Dr. Paul 18-19 (abortions for chromosomal and structural fetal anomalies generally performed after first trimester because that is when diagnosis is most likely to occur; some anomalies and abnormalities do not appear on ultrasound until second or third trimester, and some genetic testing cannot be performed before second trimester); Ex. 126, Test. Dr. Westhoff 807-09 (some chromosomal abnormalities diagnosed in first trimester, but for most patients, fetal genetic and chromosomal abnormalities not diagnosed until second-trimester amniocentesis performed; abnormal heart most likely detected at or after 20 weeks of gestation, and hydrocephalus diagnosed around 18 to 20 weeks).)

According to several of the physicians offering testimony in this case, some of the "fetal indications" for which abortions are performed include genetic abnormalities in the fetus (trisomy 13, 18, and 21[65] and

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reveal the presence of excessive or insufficient amniotic fluid have a higher risk of genetic abnormality in the fetus. Dr. Paul also testified that for women at risk, an amniocentesis is usually performed at approximately 16 to 18 weeks of gestation and the results are not available until a week thereafter. Amniocentesis may also be performed in the third trimester. (Ex. 125, Test. Dr. Paul 20-21.)

[65] Dr. Clark testified that an abortion to terminate a fetus with trisomy 21 (Down's Syndrome) is an elective abortion in that the pregnancy does not pose a risk to the mother's health. However, unlike elective abortions where the woman simply chooses not to be pregnant, Down's Syndrome is an example of an unfortunate circumstance which requires the woman to make an important personal decision regarding abortion of an otherwise wanted child. If the woman elects to abort the fetus, either labor induction or dismemberment D & E are appropriate second-trimester abortion

monosomy X) that can be incompatible with life, as well as structural abnormalities such as fetal hydrops, a generalized swelling of the fetus; head abnormalities like anencephaly,[66] holoprosencephaly,[67] and hydrocephalus[68]; serious cardiac anomalies; absent or polycystic kidneys; non-development of the fetal lungs; abdominal wall abnormalities; abnormalities of the limbs; Fabry's disease; spina bifida; and cleft palate. (Tr. 34-35, Test. Dr. Doe; Tr. 501, Test. Dr. Knorr; Tr. 315, Test. Dr. Vibhakar; Ex. 120, Test. Dr. Broekhuizen 498.)

Drs. Chasen and Broekhuizen characterized some of these fetal anomalies as incompatible with life, including anencephaly, trisomy 13 or 18, triploidy, and severe cardiac anomalies. (Ex. 121, Test. Dr. Chasen 1600; Ex. 120, Test. Dr. Broekhuizen 496-97.) Dr. Broekhuizen pointed out that when an anomalous fetus delivers until the head is lodged against the cervical os, the doctor may see the fetus move. Even in cases of

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techniques in Dr. Clark's opinion. (Ex. 891, Test. Dr. Clark 2383-85.)

[66] "Anencephaly" means "[c]ongenital defective development of the brain, with absence of the bones of the cranial vault and absent or rudimentary cerebral and cerebellar hemispheres, brainstem, and basal ganglia." *Stedman's Medical Dictionary* 76 (27th ed. 2000).

[67] "Holoprosencephaly" is the "[p]resence of a single forebrain hemisphere or lobe; cycloplia occurs in the severest form. It is often accompanied by a deficit in median facial development." *Stedman's Medical Dictionary* 827 (27th ed. 2000).

[68] "Hydrocephalus" is a "condition marked by an excessive accumulation of cerebrospinal fluid resulting in dilation of the cerebral ventricles and raised intracranial pressure; may also result in enlargement of the cranium and atrophy of the brain." *Stedman's Medical Dictionary* 839 (27th ed. 2000).

anencephaly, a lethal fetal anomaly, the fetus may be living and may survive after birth for a few months. (Ex. 120, Test. Dr. Broekhuizen 607.)

According to Dr. Cook, lethal[69] fetal anomalies that can cause maternal complications include nonimmune hydrops, which is similar to congestive heart failure in the fetus and can cause a "mirror syndrome" in the mother creating a preeclamsia-like condition; fetal conditions that cause increased amniotic fluid volume which can impair maternal breathing and normal respiration; partial molar gestation, which can lead to maternal hypertensive disease and significant bleeding; and conjoined fetuses which necessitate abdominal delivery. (Tr. 1377-79, Test. Dr. Cook.)

In Dr. Broekhuizen's view, there are also fetal anomalies which have a direct effect on the mother's ability to deliver the infant because the infant is too large to pass through the birth canal. Examples of such conditions include macrocephaly, where the head is too big to deliver, and immune hydrops or fetal ascites, where fluid and edema accumulate in the abdomen or all the fetal tissues and the fetal body is too large to deliver. In such cases, Dr. Broekhuizen believes induction after 24 weeks is appropriate to avoid the necessity of surgical procedures for delivery that are associated with higher morbidity and mortality rates, including cesarean section or hysterotomy. (Ex. 120, Test. Dr. Broekhuizen 499-500.)

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[69] Dr. Broekhuizen testified that a lethal fetal anomaly exists when there is no long-term meaningful life expectancy and death would be expected within hours and sometimes weeks of birth. (Ex. 120, Test. Dr. Broekhuizen 485.)

Dr. Clark opined that for the most part, fetal anomalies have nothing to do with the mother's health and do not require termination of the pregnancy. Exceptions include extreme cases of hydrocephalus or possibly conjoined twins. (Ex. 891, Test. Dr. Clark 2378-79.)

In fetal-indication cases, Dr. Doe makes "a much more determined effort to deliver the fetus as intact as possible," that is, with "no marks at all and the head completely intact" and not compressed. (Tr. 50, Test. Dr. Doe.) Dr. Doe attempts to achieve more generous dilation when performing a D & E for fetal indications, allowing him or her to remove the fetus with less trauma.

In the fetal indication procedure, it's much more important to be able to get an accurate pathological diagnosis to verify the abnormality. And, also, these are pregnancies, generally, that were planned and very much wanted, and the patient and family are going through a very stressful time and frequently want the opportunity to say good-bye to the fetus, to be able to hold it and examine it. So I make a special effort to deliver the fetus with as little trauma as possible, so they can hold the fetus and examine it.

(Tr. 42-43 & 56-58, Test. Dr. Doe (many patients aborting wanted pregnancies for fetal anomalies wish to see, touch, and hold the aborted fetus "and cry, and say good-bye"; some patients wish to have a burial or memorial service).)

(b) PATHOLOGICAL TESTING

According to Dr. Baergen, the most important characteristic of a specimen for making an accurate pathological diagnosis of a fetal anomaly or syndrome is

having an intact specimen. (Ex. 119, Test. Dr. Baergen 1109.) The more intact the fetal specimen received, the greater the pathologist's ability to analyze that specimen and correctly diagnose fetal anomalies, identify specific fetal abnormalities, and determine a diagnosis of what disease or disease process caused the anomalies or abnormalities. (Ex. 119, Test. Dr. Baergen 1098.)

Examples of fetal anomalies or syndromes where intact specimen evaluation is particularly useful to Dr. Baergen include congenital heart abnormalities, where the heart and lungs must be intact to evaluate the vessels of organ structure; laterality syndrome, where the abdomen must be intact to determine if the fetus had two left sides (e.g., two spleens and no heart) or two rights sides (e.g., two hearts and no spleen); and VATER, a fetal syndrome involving multiple organ defects. (Ex. 119, Test. Dr. Baergen 1107-09.)

Dr. Baergen explained that a pathologist's examination of a fetal specimen begins with a gross examination looking for abnormalities visible to the naked eye. Following the gross examination, the pathologist performs a microscopic examination on specific sections of the fetal tissue. A third method of evaluation uses x-rays or radiographs to determine and identify specific bony abnormalities. Dr. Baergen stated that regardless of the age of the fetus, when a fetus is removed in pieces or with significantly disrupted tissues as a result of an abortion procedure, it is difficult for pathologists to perform a reliable gross examination of the specimen or to identify particular organs or tissues for microscopic evaluation. Moreover, the microscopic assessment of the tissue architecture for diagnosing certain organ abnormalities is limited if the organs themselves are disrupted. When the fetal tissue is disarticulated,

pathologists are unable to assess the interrelationship or layout of the fetus's bony structure and may be unable to identify bones that were broken or disrupted. Once the joints are disarticulated or disconnected, the structure of the fetal joints cannot be evaluated. The more disrupted the fetus, the less information the pathologist can obtain from a pathological examination. (Ex. 119, Test. Dr. Baergen 1099-1103.)

Dr. Baergen testified that analyzing specimens obtained through amniocentesis and chorionic villus sampling ("CVS"—that is, removing a sample of the chorionic villi of the placenta) can assist with the diagnosis of chromosomal and genetic fetal abnormalities such as cystic fibrosis, Tay Sachs, and trisomy 13, 18, or 21. However, amniocentesis and CVS samples cannot feasibly be used to screen for the majority of the known fetal abnormalities and syndromes. In addition, Dr. Baergen stated that fetal chromosomal analysis is not often done on second-trimester fetuses because chromosomal anomalies usually lead to spontaneous abortion in the first trimester. (Ex. 119, Test. Dr. Baergen 1103-06 & 1132-36.)

Dr. Baergen cautioned that ultrasound examination cannot replace pathological examination of the fetus because ultrasounds are not completely accurate, and for specific diagnosis, ultrasound imaging of a fetus in a certain plane cannot replace the information gained from a three-dimensional and microscopic evaluation of the fetal tissue. (Ex. 119, Test. Dr. Baergen 1106-07 & 1131.)

According to Dr. Baergen, an accurate diagnosis of a fetal anomaly or syndrome is important to determine if the problem sporadically occurs or if it was inherited and therefore presents a recurrent risk in future

pregnancies. Such a diagnosis is used to counsel patients on the recurrence risk based on previous experience with a particular fetal anomaly or syndrome. (Ex. 119, Test. Dr. Baergen 1109.)

Dr. Baergen testified that delivery of an intact fetus correlates with an intact placenta; if the fetus is disrupted, the placenta is also likely to be disrupted. Some fetal developmental problems initially appear to be fetal anomalies when the real cause is a placental abnormality. In such cases, Dr. Baergen believes an accurate diagnosis of the placental abnormality can assist physicians in treating the underlying condition in the mother and permit her to have a subsequent pregnancy and a normal baby. (Ex. 119, Test. Dr. Baergen 1114-15, 1118-19, 1136.)

Drs. Baergen and Broekhuizen testified that an intact brain assists in the pathological diagnosis of abnormalities of the brain such as Arnold-Chai malformation, agenesis of corpus callosum, Dandy-Walker syndrome, holoprosencephaly, cerebral ventriculomegaly, cisterna magna cyst, and porencephalic cyst. Brain anomalies represent only a minority of the total fetal anomalies. The intact D & E procedure makes it more difficult to diagnose brain abnormalities. (Ex. 119, Test. Dr. Baergen 1123-26 & 1136; Ex. 120, Test. Dr. Broekhuizen 581-82; Ex. 123, Test. Dr. Frederiksen 1220-21 (intact D & Es produce intact fetuses for pathological evaluation, but this procedure cannot be used to confirm diagnosis that fetus had intracranial defect; fetuses delivered by induction are fully intact and can be fully evaluated).)

Dr. Baergen believes an intact fetal face may be useful in diagnosing fetal anomalies such as osterogenesis imperfecta and encephaly. The intact D & E

procedure may, but usually does not, impact the facial structure of the fetus. (Ex. 119, Test. Dr. Baergen 1126-28 & 1136; Ex. 126, Test. Dr. Westhoff 831-32 (intact D & E involves suctioning intracranial contents of fetal head through incision at base of skull, but facial structures are not disturbed by the process).) Dr. Baergen also believes having the rear of the fetal head intact may assist in diagnosing anomalies involving the base of the skull and spine, such as encephalocele and spina bifida. (Ex. 119, Test. Dr. Baergen 1128-29.)

Dr. Baergen does not routinely know what abortion procedures were used to terminate the pregnancies that resulted in the fetuses she examines. Only 30% of the fetuses Dr. Baergen receives for pathological evaluation are completely intact. (Ex. 119, Test. Dr. Baergen 1121-22.) There are no studies or literature comparing the method of abortion with the ability to diagnose fetal anomalies, according to Dr. Baergen. (Ex. 119, Test. Dr. Baergen 1122.)

Dr. Baergen said that the labor-induction method of abortion generally results in a completely intact fetus. (Ex. 119, Test. Dr. Baergen 1129.) However, if the fetus dies *in utero* and is retained for a period of time, the fetus undergoes degenerative changes, autolytic change, and maceration of the fetal tissue, which hampers the pathological interpretation and diagnosis of fetal anomalies and abnormalities. (Ex. 119, Test. Dr. Baergen 1136.)

(c) PHYSICIANS' PRACTICES IN FETAL-ANOMALY CASES

With his fetal-indication patients, Dr. Doe intends to deliver an intact fetus so that the preoperative diagnosis can be confirmed and patients can be

appropriately counseled regarding future pregnancies. He believes that while genetic abnormalities almost always can be confirmed by analysis of fetal tissue, structural abnormalities may require testing of an intact fetus, and "[o]n occasion, [pathologists] are not able to confirm the diagnosis because there is too much fetal disruption." (Tr. 54-56, Test. Dr. Doe.)

While Dr. Doe does not believe that the intact D & E procedure is "necessary" for pregnancy terminations involving certain fetal anomalies, he believes the intact D & E would be "preferable" for pathological and grieving reasons. (Tr. 110-11, Test. Dr. Doe.)

Dr. Chasen stated that for abnormalities not involving the brain, the intact D & E procedure maximizes the pathologist's opportunity to correctly identify a fetal anomaly and, in turn, permits appropriate counseling to the parents because the tissues and organs are preserved and are not disrupted. (Ex. 121, Test. Dr. Chasen 1603.) However, Dr. Chasen believes that genetic abnormalities can be diagnosed on any fetal tissue, even a dismembered fetus. (Ex. 121, Test. Dr. Chasen 1686.)

Dr. Cook testified that if an intact fetus is deemed necessary or desirable for purposes of pathological testing, a safe alternative to the intact D & E procedure is induction of labor or cesarean delivery. (Tr. 1336, Test. Dr. Cook.)

Dr. Lockwood testified that if chromosomal analysis of a fetus is necessary, "a piece of placenta or amniotic fluid sample would be sufficient." If anatomic analysis of the fetal brain or central nervous system is necessary, Dr. Lockwood opined that a medical-induction abortion would be more appropriate in order to obtain

an intact fetus, barring any contraindications to that procedure. The intact D & E procedure might "allow better diagnostic information" of the thorax and fetal extremities, which could be damaged during a D & E involving dismemberment. However, "in point of fact, there are very rare circumstances in which [Dr. Lockwood] will tell a patient she should have a medical abortion rather than a D & E to terminate an anomalous fetus." (Tr. 1726-27, Test. Dr. Lockwood.)

If delivery of an intact fetus for pathological purposes is necessary, Dr. Lockwood thinks that the use of digoxin or potassium chloride to ensure fetal demise at the outset of the procedure would not negatively affect a physician's ability to make a pathological assessment, as long as the interval between the injection and delivery was "not too long." (Tr. 1728, Test. Dr. Lockwood.)

c. INDUCING FETAL DEMISE

Several witnesses testified that a physician could induce fetal demise before an abortion procedure to avoid performing an intact D & E on a living fetus. They explained that two main drugs are used to induce fetal demise prior to an abortion procedure. KCl, or potassium chloride, is injected directly into the fetal heart using ultrasound control. Digoxin, a heart medication, can be injected into the umbilical cord, heart, the muscle or body cavity of the fetus, or in the amniotic fluid, with or without ultrasound guidance. (Tr. 66-67, Test. Dr. Doe; Tr. 1702-03, Test. Dr. Lockwood.)

In Dr. Lockwood's opinion, it requires "significant skill" to inject digoxin into the umbilical cord, less skill to inject the fetal heart, still less skill to inject the fetal

body, and "very little" skill to inject the amniotic fluid. (Tr. 1703, Test. Dr. Lockwood.)

Beginning in the eighteenth week, Dr. Carhart injects the fetus with lidocaine and digoxin through the abdominal and uterine walls of the patient. Dr. Carhart stated that he is able to do intracardiac injections 95% of the time and intrafetal injections 5% of the time. The lidocaine anesthetizes the fetus and the digoxin causes fetal demise. According to Dr. Carhart, inducing fetal demise in this manor carries "a significant mortality morbidity risk," as well as risk of infection, intrauterine and intraamniotic bleeding if "you happen to hit an artery vessel in the placenta," and bleeding in the uterine and abdominal cavities and in the abdominal walls. However, Dr. Carhart has never had a complication in performing this procedure. (Tr. 607-08, 629-31, 632, 637, 671, Test. Dr. Carhart.)

Dr. Carhart testified that inducing fetal demise prior to performing an abortion causes the patient's uterus to contract, making it easier to insert the second round of laminaria to achieve greater dilation. He explained that fetal demise also stops the blood flowing through the placenta, thereby causing the placenta to "shrivel," loosening the connection between the placenta and the uterine wall, softening fetal tissue, and enabling Dr. Carhart to remove the placenta and fetus intact with only minimal cleanup required in the subsequent D & C. When Dr. Carhart induces fetal demise on the first day and performs the abortion two days later after two rounds of laminaria, he sees a two-week decrease in the size of the fetal cranium that must ultimately be delivered. (Tr. 634-37, Test. Dr. Carhart.)

Dr. Carhart has had "a few" patients for whom his method of inducing fetal demise was contraindicated.

While Dr. Carhart has attempted to induce fetal demise prior to 18 weeks, he "quit very soon" because the "risks and the benefits did not weigh out in the patient's favor." It was much harder for Dr. Carhart to locate the fetus earlier than 18 weeks because the smaller the uterus, the deeper it lies within the pelvis and the more likely it is to be obstructed by the ovaries, "tubes," bowel, and bladder. (Tr. 630 & 637-38, Test. Dr. Carhart.)

For Dr. Carhart's 18- to 24-week patients to whom he administers digoxin to kill the fetus before its expulsion, he was unable to cause fetal demise in one case involving a 21-week twin pregnancy. In that case, Dr. Carhart performed the fetal injection and began inserting laminaria when the patient began bleeding with increasing severity. Dr. Carhart administered a number of medications in an attempt to slow the blood flow, which gave him 20 minutes to complete the abortions with two centimeters or less of dilation. Because of the extent of the patient's bleeding, Dr. Carhart felt he could not wait the 30 to 90 minutes it would take for the injection to cause fetal death. (Tr. 740-43, Test. Dr. Carhart.)

Dr. Fitzhugh does not induce fetal demise before beginning an abortion procedure. He testified that he is uncomfortable administering the injections necessary to induce fetal demise; he has little experience performing amniocentesis, as all such procedures are performed by maternal-fetal specialists in Dr. Fitzhugh's hospital; he prefers not to decide whether such an injection is necessary; and the advantages of inducing fetal demise before abortion procedures have "not been shown" to him. (Tr. 251-52 & 254-56, Test. Dr. Fitzhugh.)

When Dr. Fitzhugh has aborted pregnancies in which fetal demise has occurred naturally, he described the D & E procedure as easier because the fetal ligaments at the joints were easier to disarticulate because fetal death had occurred prior to the abortion. (Tr. 284-85, Test. Dr. Fitzhugh.)

From operating an abortion practice in Alabama, Dr. Knorr is experienced at administering injections to cause fetal demise. Alabama law at the time he practiced there required that digoxin be used to induce fetal demise after 18 weeks of gestation. Therefore, while the use of digoxin was within the standard of care in Alabama after 18 weeks LMP, it is not Dr. Knorr's current practice to do so on all patients because it would "subject [his] patients to unnecessary discomfort and medical risk." Dr. Knorr does not believe that this standard of care necessarily applies outside of Alabama. (Tr. 559-61 & 566-67, Test. Dr. Knorr.)

Prior to performing an abortion, Dr. Knorr currently "[v]ery rarely" induces fetal demise. When he does so, his patients are beyond 22 weeks of gestation. He does not "believe in it" because it is an "extra procedure, and, . . . [h]arm . . . can be accomplished in the most benign type of procedure." Specifically, it concerns Dr. Knorr to administer lanoxin, KCl, or digoxin when patients have had prior surgery or pelvic inflammatory disease with adhesions in the pelvis. While such injections can puncture a bowel or maternal vessel, cause sepsis or drug reactions, and can be frightening and expensive for patients, Dr. Knorr has not caused a bowel or vessel puncture or sepsis from such an injection. (Tr. 511-12 & 561-62, Test. Dr. Knorr.)

When he does induce fetal demise prior to performing an abortion and when there is a presenting

fetal part at the lowest point of the uterus, Dr. Knorr numbs the patient's vagina and then, with sonographic guidance, delivers digoxin through the vagina. Dr. Knorr testified that this procedure spares the patient from seeing a needle being inserted into her abdomen and the patient will feel only a small pinch on her numbed vaginal skin. (Tr. 562-63, Test. Dr. Knorr.)

Dr. Vibhakar does not induce fetal demise prior to performing abortions with intrauterine or intrafetal injections of digoxin or KCl because "[i]t's not deemed necessary, and it would add an increased burden to the girl/woman with an additional procedure and small risk associated with that, and more anxiety and discomfort and expense and time involved." Such injections, like amniocentesis, can very rarely result in "infection, bleeding and even death." (Tr. 347-49, Test. Dr. Vibhakar.) However, it is the policy of the University of Iowa where Dr. Vibhakar is employed to induce fetal demise after 22 weeks prior to performing induction abortions to avoid delivery of a live fetus.

> Even if it's truly 22 weeks and nonviable, it involves less, might be less traumatic on the mother, and then if it is, if the dating is off, there is poor dating or because ultrasound dating can be off by 20%, then it avoids confusion on the part of the staff in regard to resuscitation issues.

(Tr. 393-94, Test. Dr. Vibhakar.)

Two days before Dr. Doe performs an abortion in his or her maternal-indication cases, Dr. Doe injects digoxin starting at 18 weeks in order to soften fetal tissues and to make it easier and safer to remove fetal parts through the cervix, even with inadequate dilation. Dr. Doe testified that prior to 18 weeks, the fetus is

small and soft and dilation is usually adequate enough such that inducing fetal demise is not necessary. Further, the patient's uterus is smaller, making it technically difficult to correctly position the needle and avoid injecting maternal structures such as the bowel, which, prior to 18 weeks, are located between the patient's abdominal wall and uterus. Dr. Doe testified that perforating a bowel may cause no damage, or it could cause the patient's bowel contents to spill, creating a significant risk of a severe life-threatening infection such as peritonitis, an infection of the lining of the abdominal cavity. (Tr. 67-69, Test. Dr. Doe.)

Dr. Doe estimates that out of the 50 to 100 digoxin injections performed in his or her career, he or she has not caused any infections or perforated any blood vessels or internal organs. Dr. Doe thinks the risks of intrauterine injection of digoxin are "very low" after 18 weeks, and that the skills necessary to inject digoxin can be learned by a clinical practitioner. (Tr. 118-19, Test. Dr. Doe; Ex. 123, Test. Dr. Frederiksen 1154-55 (Dr. Frederiksen learned how to perform fetal intracardiac injections during maternal-fetal medicine training; this skill is specialized and not routinely taught to obstetricians and gynecologists).)

Dr. Doe has tended to patients whose diagnostic amniocentesis caused intrauterine fetal demise, rupture of membranes, and infection necessitating evacuation of the uterus. Dr. Doe stated that long-term complications such as infertility can result from such an infection that spreads outside the uterus. (Tr. 147-48, Test. Dr. Doe.) Dr. Cook testified that injections into a woman's abdomen create potential risks for infection and maternal sepsis, but "the risks are fairly small." (Tr. 1458, Test. Dr. Cook.)

Dr. Doe believes that KCl and digoxin injections are, in skilled hands, generally safe for the patient, but they are of no medical benefit to the patient. (Tr. 71 & 124, Test. Dr. Doe; Tr. 972, Test. Dr. Bowes (no medical benefit to woman to inject substances to cause fetal demise in second trimester; injections cannot be given to all women in all circumstances; all physicians are not skilled enough to perform the injection).) However, Dr. Doe observed that inducing fetal demise in this manner prior to performing an abortion does provide a "psychological benefit to the patient, family and medical and nursing staff in knowing that . . . [the] 'fetus does not feel any pain,' and in the event of a premature . . . delivery . . . induced by the osmotic dilator insertions, there is no possibility there will be any sign of life, fetal life, which, if it occurs, can be very distressing." (Tr. 123-24 (statement in letter attributed to Dr. Doe that accurately reflects Dr. Doe's views); Tr. 151, Test. Dr. Doe.)

Dr. Doe does not induce fetal demise in fetal-indication cases because hospital perinatologists are responsible for performing KCl injections at 22 weeks and up. Some injections are performed prior to 22 weeks if requested by a patient. Before 22 weeks, "you can be very certain that there will be fetal demise during the extraction or induction procedure, and after that, there may be some signs of fetal life which is very disturbing to the patient and to the nursing staff." (Tr. 69-70, Test. Dr. Doe.)

Dr. Doe testified that the longer a fetus remains in the uterus following the perinatologist's KCl injection, the greater the amount of fetal tissue softening and fragility, making it more difficult for Dr. Doe to remove the fetus in large pieces or intact. (Tr. 70-71, Test. Dr.

Doe.) Dr. Lockwood agreed: "The longer the interval of fetal death, the more the tissue would become macerated and softer, and more compliant, and presumably the less risky the procedure would be for a D & E." (Tr. 1703, Test. Dr. Lockwood.)

Dr. Chasen does not routinely induce fetal demise because he believes: (1) *in utero* fetal death may interfere with the pathologist's review of the fetus since fetal death prompts the maceration and decay process, and (2) the procedure causes patient discomfort, there are rare medical complications, and it is difficult and occasionally impossible to do. (Ex. 121, Test. Dr. Chasen 1636 & 1638.)

However, Dr. Chasen will induce fetal demise upon patient request. In cases where the fetus is at 23 weeks of gestation and there is no lethal abnormality, Dr. Chasen warns the patient that inserting laminaria can prompt labor and the delivery of a live baby, and the patient is allowed to choose whether fetal demise should be induced. Dr. Chasen stated that he induces fetal demise prior to inserting laminaria and performing the abortion procedure in some patients by injecting a needle directly into the fetal heart and administering potassium. (Ex. 121, Test. Dr. Chasen 1570-71 & 1636-37.)

Dr. Broekhuizen has never induced fetal demise before performing a D & E. However, he has introduced digoxin into the amniotic fluid when he has induced fetal demise during an induction abortion. He has performed this procedure approximately 30 to 40 times and has never seen any maternal complications, but on two occasions, the procedure failed to induce fetal demise. (Ex. 120, Test. Dr. Broekhuizen 607, 634-35, 641.)

Drs. Chasen and Frederiksen testified that injecting potassium chloride into the fetal heart may not be an available option if the woman is obese, the uterus is distorted by benign fibroid tumors, the fetal heart and umbilical cord are not close to the surface of the maternal abdomen, or the woman is afraid of needles and will not remain still for the procedure. Moreover, the mechanics of ultrasound depend on the presence of fluid and, for some fetal abnormalities or where the woman's membranes have ruptured, there is no amniotic fluid. In these cases, ultrasound cannot be used to assist in locating and injecting the fetal heart. (Ex. 121, Test. Dr. Chasen 1638-39; Ex. 123, Test. Dr. Frederiksen 1149-52 & 1181 (inducing fetal demise by injecting fetal heart with KCl or digoxin cannot always be accomplished, such as when the mother is very obese, the fetus is in a position which hinders access to the fetal heart, the fetal heart is difficult to visualize by ultrasound, or there is no interface between the fetal and maternal tissue due to the lack of amniotic fluid; in such cases, digoxin can be injected into the muscle of the fetus, but this is not always successful).)

According to Dr. Chasen, a doctor may induce fetal demise by cutting the umbilical cord, but this introduces a forceps into the woman's uterus, posing the risk of complications that may accompany that procedure. The fetal death is not instantaneous and can take several minutes, which prolongs the operative time and increases the risk of bleeding and infection. (Ex. 121, Test. Dr. Chasen 1639-41; *see also* Ex. 891, Test. Dr. Clark 2417 (Dr. Clark has never induced fetal demise with injection or asphyxiation before performing an abortion; if the cord is clamped, it may take fetus 10 to 15 minutes to die from lack of oxygen).)

Dr. Lockwood stated that KCl injections are used at Yale University for "multifetal reductions"—for example, KCl may be injected into three out of six embryos that are being carried by one woman. (Tr. 1702, Test. Dr. Lockwood.) The risks of digoxin or KCl injections are "presumably negligible," but "not zero." Dr. Lockwood would "certainly not want to do [such injections] in a patient with HIV or hepatitis." (Tr. 1757, Test. Dr. Lockwood.)

Dr. Broekhuizen testified that while inducing fetal demise may avoid delivery of a live fetus as referenced in the Act, inducing fetal demise is a very personal decision. The doctor explained that some patients do not want to induce fetal demise because they do not want to undergo the procedure. Some patients whose fetuses have lethal anomalies desire a live birth, allowing the fetus to die in their arms. For religious reasons, perhaps based on the distinction between blessing and baptizing a child, others will not permit fetal demise to be induced. Others believe inducing fetal demise provides comfort in the pregnancy-termination procedure. (Ex. 120, Test. Dr. Broekhuizen 561-62.)

When appropriate, Dr. Frederiksen induces fetal demise in both first- and second-trimester abortions. (Ex. 123, Test. Dr. Frederiksen 1179.) When inducing fetal demise, Dr. Frederiksen generally uses potassium chloride and injects the fetal heart under ultrasound guidance. (Ex. 123, Test. Dr. Frederiksen 1177.)

When induction is used to terminate a pregnancy, Dr. Frederiksen routinely induces fetal demise because she believes there is a medical benefit in doing so. That is, studies indicate that delivery of the fetus by induction with misoprostol takes less time if the fetus is dead.

(Ex. 123, Test. Dr. Frederiksen 1151, 1177, 1183.) In contrast, unless the patient requests it, Dr. Frederiksen does not induce fetal demise before D & E procedures because there is no medical benefit in doing so. (Ex. 123, Test. Dr. Frederiksen 1151 & 1179.)

Dr. Frederiksen views the risks associated with inducing fetal demise as:

* Infecting the tissues of the peritoneal[70] cavity and subcutaneous tissue by placing a needle through the abdominal wall into the uterus and withdrawing fluid through these abdominal tissues overlying the uterus. (Ex. 123, Test. Dr. Frederiksen 1152-53.) For a healthy woman, the risk of infection associated with inducing fetal demise is comparable to that of amniocentesis-1 in 1,000 patients. (Ex. 123, Test. Dr. Frederiksen 1177-78.). In Dr. Frederiksen's view, amniocentesis and fetal intracardiac injection should not be performed on women with sepsis because these procedures place a needle in an infected area of the body and withdraw it through maternal tissues. (Ex. 123, Test. Dr. Frederiksen 1181 & 1236-37; Ex. 121, Test. Dr. Chasen 1648-49 (in rare instances, injecting potassium chloride into the fetal heart precipitates infection; further, the procedure is uncomfortable, requiring the insertion of a

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[70] "Peritoneal" relates to the peritoneum, which is the "serous sac, consisting of mesothelium and a thin layer of irregular connective tissue, that lines the abdominal cavity and covers most of the viscera contained therein." *Stedman's Medical Dictionary* 1353 (27th ed. 2000).

needle into the abdomen, and can take five to ten minutes or perhaps longer).)

* With a prior incision into the abdomen, the patient may have scar tissue in the peritoneal cavity or bowel between the abdominal wall and uterus. A needle passing through the abdomen may perforate these tissues and increase the risk of infection. (Ex. 123, Test. Dr. Frederiksen 1153.)

* In women with bleeding disorders, such as disseminated intravascular coagulation, a low platelet count, or leukemia, passing a needle through the abdomen increases the risk of hemorrhage, especially in the subcutaneous tissues and peritoneal cavity. (Ex. 123, Test. Dr. Frederiksen 1153.)

* If the needle is inadvertently placed in maternal rather than fetal tissue, injecting potassium chloride or digoxin places the mother at risk of experiencing cardiac arrythmia. (Ex. 123, Test. Dr. Frederiksen 1154.) This risk does not exist with amniocentesis, which involves only the removal of fluid, and not injection of fluid into the woman. (Ex. 123, Test. Dr. Frederiksen 1235- 36.)

Dr. Westhoff usually does not induce fetal demise by injecting the fetus or the amniotic fluid with potassium chloride or digoxin because the procedure offers no benefit to the woman, can be difficult, has associated risks, and can fail. (Ex. 126, Test. Dr. Westhoff 877.) In addition, Dr. Westhoff believes that inducing fetal demise results in softened fetal tissue, requires

additional instrument passes to evacuate the uterus, and presents a greater risk of retained fetal tissue and infection. (Ex. 126, Test. Dr. Westhoff 879.)

Dr. Hammond has not been trained to induce fetal demise with either an intraamniotic or intrafetal injection of a chemical agent, so he chooses not to do it. According to Dr. Hammond, fetal demise is not routinely induced because there is no proven maternal benefit and there are some low risks associated with the procedure. (Ex. 124, Test. Dr. Hammond 614-15.)

d. FETAL PAIN

Dr. Kanwaljeet Anand is a diplomate of the American Board of Pediatrics specializing in the care of critically ill children and infants who has researched neonatal and fetal pain for the past 20 years. He completed his medical degree, internship, and one year of a post-graduate pediatrics program in India. He then went to the University of Oxford on a Rhodes Scholarship for three years, after which he received a Doctor of Philosophy under the faculty of clinical medicine. At Oxford, Dr. Anand performed research showing that newborn infants "mount a massive hormonal and metabolic response to surgery, and that this response can be suppressed, to some extent, by giving adequate anesthesia during the operative procedure." Dr. Anand then went to Harvard Medical School to complete a post-doctoral fellowship in the school's Department of Anesthesia, followed by a residency in pediatrics and fellowship training in neonatal and pediatric critical care. Dr. Anand then became an assistant professor of pediatrics, anesthesiology, psychiatry, and behavioral sciences at Emory University School of Medicine in Atlanta where he continued his studies on the

physiology of pain and stress in early life. Currently, Dr. Anand is a professor of pediatrics, anesthesiology, pharmacology, and neurobiology at the University of Arkansas for Medical Sciences. He has published extensively in the areas of development of the pain system, the interaction between pain and stress in early life, pain management, and fetal pain and consciousness. He has never performed an abortion procedure. (Tr. 1000-08 & 1044, Test. Dr. Anand; Ex. 524.)

Dr. Anand believes there is an 80% probability that fetuses are sensitive to pain from about 20 weeks of gestation and thereafter because at 20 weeks, all of the anatomical structures necessary to experience pain are present, connected, and functional. These anatomical structures include skin receptors, sensory nerves, the dorsal horn of the spinal cord, brain stem, thalamus, several subcortical structures, the cortex, and the insula. (Tr. 1014-24, 1032-33, 1068, Test. Dr. Anand.) By 20 weeks, the fetus has sensitivity to touch and sound and can exhibit physiological indicators of pain such as the secretion of stress hormones, changes in heart rate and blood flow, changes in electrical activity of the brain, and deep inspiration and expiration of the diaphragm similar to crying activity. (Tr. 1025-30 & 1034-35, Test. Dr. Anand.)

Dr. Anand testified that there exists a greater sensitivity to pain earlier in development. Because of the lack of descending inhibitory fibers that block incoming painful stimuli, the number of receptors in the skin, and the level of expression of various chemicals, Dr. Anand believes that a fetus is most sensitive to pain between 20 and 30 weeks of gestation, and that performance of the banned procedure on a fetus in that age range would cause "severe and excruciating pain" to

the fetus. Dr. Anand believes that disarticulation would cause "severe pain" to the fetus in that gestational range, and a fetal injection of digoxin or KCl would also cause pain.[71] (Tr. 1036-38 & 1044-46, Test. Dr. Anand.) While he has not performed studies measuring the effects of anesthesia on fetuses, Dr. Anand opined that in order to anesthetize the fetus against such pain, "toxic amounts" of anesthesia would have to be given to the mother. (Tr. 1049-52, Test. Dr. Anand.)

Dr. Anand admitted that none of the studies on which he relied in forming his opinion that a fetus can experience pain at 20 weeks "directly establish fetal pain at 20 weeks." Rather, Dr. Anand's opinion that a fetus can experience pain at 20 weeks is based on "inference and extrapolation" drawn from those studies, as well as from the existence, connectivity, and functionality of a fetus's anatomical structures at 20 weeks. However, "until the fetus is able to report to us, we don't know what it is experiencing." (Tr. 1032-35 & 1075-76, Test. Dr. Anand.)

Dr. Anand explained that "[t]here is disagreement in the medical community on the issue of whether fetuses, at 20 weeks and later, are able to feel pain." Specifically, there is a consensus in the medical community that is familiar with research in the anatomical

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[71] Dr. Anand explained that a newborn infant at full term has levels of endorphins that are "about 1,000-fold higher than the highest levels ever recorded in the adult human bloodstream. So the release of beta endorphin or other . . . chemicals that block the painful stimuli [produced by the birth process] would protect the newborn infant at full term." These protective mechanisms do not begin developing until about 32 to 34 weeks of gestation and are fairly well developed at full term. (Tr. 1047-48, Test. Dr. Anand.)

development area that, at 20 weeks, the physical structures are in place that would allow a fetus to experience pain. However, others in the "relevant medical community" believe that fetuses do not have the mechanisms in place to transmit painful stimuli and perceive pain at 20 weeks. (Tr. 1059-68, Test. Dr. Anand.)

According to Dr. Anand, a fetus must have some level of consciousness to experience pain, and consciousness cannot be measured, even in adults. (Tr. 1069, Test. Dr. Anand.) There is "no consensus in the medical community about when fetal consciousness occurs, if at all." (Tr. 1072-73, Test. Dr. Anand.) Despite the "intense controversy in this area," Dr. Anand believes that a fetus experiences consciousness "around the time that the pain system is completely developed," or about 20 weeks of gestation, as suggested by observed fetal responses—independent of its mother's responses—to sound, touch, light, taste, and pain. (Tr. 1038-41, Test. Dr. Anand.)

Other physicians appearing as witnesses before the court offered the following opinions regarding fetal pain:

* Dr. Sprang believes that both the intact D & E and traditional D & E procedures would be "excruciatingly painful for a fetus." (Tr. 1240, Test. Dr. Sprang.)

* Dr. Lockwood believes that between 20 and 24 weeks, the physician should "do everything they can possibly do while respecting a woman's reproductive choices and autonomy to minimize trauma and pain to the fetus as long

as it doesn't endanger the mother's health." (Tr. 1757, Test. Dr. Lockwood.)

* Dr. Creinin is not a fetal pain expert, but he advises patients that, based on the best data available, fetuses are unable to feel pain in the way humans do until 26 weeks of gestation. Based on studies by the Royal College of Obstetrics and Gynecology, Dr. Creinin explained that second-trimester fetuses may have pain receptors and reflexive movements, but they do not have conscious brains and are not aware of pain or their automatic reflexive acts in response to stimuli, similar to patients who are under general anesthesia. (Ex. 122, Test. Dr. Creinin 722-27.)

* Dr. Westhoff does not know if the second-trimester fetus experiences fetal pain. She notes that the fetus pulls away or reacts during the needle injection of amniocentesis, but does not similarly respond during the D & E procedure. In her practice, the fetus is limp throughout the D & E, showing no responsive or spontaneous motion. She believes the fetus does not respond during the D & E because intravenous analgesics and anesthesia have been administered to the mother. (Ex. 126, Test. Dr. Westhoff 783-85 & 800.)

* When Dr. Hammond performs D & Es after 16 to 18 weeks of gestation, the mother is placed under deep sedation which he believes may confer some pain relief to the fetus. Under the current state of the literature, it is difficult for Dr. Hammond to say whether the fetus feels

pain at all, and if it does, there is no information comparing the relative levels of pain a fetus may experience from puncturing the fetal skull and severing the spinal cord, intracardiac fetal injection, toxic amniotic fluid, dismemberment, or asphyxiation. (Ex. 124, Test. Dr. Hammond 662-64.)

* In about 70% of Dr. Frederiksen's cases, the umbilical cord comes down when the amniotic fluid is suctioned from the uterus. The cord can then be cut, which leads to death. Dr. Frederiksen testified that this is one way of attempting to reduce any possibility of fetal pain, but it cannot be accomplished in every circumstance. (Ex. 123, Test. Dr. Frederiksen 1075.)

e. VIABILITY

Many of the witnesses appearing before the court testified regarding their definitions of fetal "viability."

Dr. Paul explained that based on medical definitions, a living fetus is a fetus at 10 weeks of gestation that has a heartbeat. Before 10 weeks of gestation, the products of conception are known as an embryo. A living fetus is not synonymous with a viable fetus. (Ex. 125, Test. Dr. Paul 76.)

According to Dr. Lockwood, viability is both a legal and clinical concept. Legally, viability varies by state-some states set viability at 26 weeks, many set it at 24 weeks, and in some states, "it's well beyond that." (Tr. 1679, Test. Dr. Lockwood.) From a practical and clinical perspective, viability means "that point at which there is a meaningful probability of survival of the

fetus" outside the body of the mother. Dr. Lockwood believes that 23 and 6/7 weeks is generally the point of viability, depending upon the condition of the fetus. (Tr. 1650 & 1679, Test. Dr. Lockwood (fetus that is infected, growth-retarded, small, and in extremis is probably not viable at 23 and 6/7 weeks).)

Many of the physician witnesses in this case testified that available data indicates that a fetus is viable at 24 weeks of gestation, meaning 24 weeks after the first day of the last menstrual period. (Ex. 125, Test. Dr. Paul 14-15; Ex. 120, Test. Dr. Broekhuizen 606 (fetal viability begins at "around 24 weeks"); Ex. 123, Test. Dr. Frederiksen 1162-63 (normal fetus viable at 24 weeks; there is data indicating that 24-week fetus has 50% chance of surviving delivery room); Ex. 126, Test. Dr. Westhoff 765-66 (fetal viability occurs when fetus is capable of sustained life outside the uterus; with excellent neonatal care, substantial number of fetuses will be viable after 24 weeks of gestation).)

Dr. Fitzhugh estimates viability to be 23 or 24 weeks based on his hospital's practice of trying to save babies that have a capability of life, such as those exhibiting breathing activity, at 23 weeks. (Tr. 283-84, Test. Dr. Fitzhugh.) Dr. Fitzhugh normally does not perform abortions after 22 weeks, except in occasional cases in which fetal demise has occurred naturally. (Tr. 284-85, Test. Dr. Fitzhugh.)

Dr. Knorr thinks a fetus is able to survive outside the mother late in the 23rd week of gestation. (Tr. 561, Test. Dr. Knorr.)

Defense witness Dr. Bowes has observed "wide interinstitutional variations" in "neonatal viability." (Tr. 960, Test. Dr. Bowes.) At Dr. Sprang's institution

in Chicago, a fetus's chance of survival outside the womb is 1% at 22 weeks of gestation and 80% at 25 weeks. Dr. Sprang believes that viability is 23.0 weeks right now, but "[a]s modern medicine advances, the number keeps going down." (Tr. 1117, 1173, 1239, Test. Dr. Sprang; Tr. 1266-67 & 1432-33, Test. Dr. Cook (viability means the "ability to survive as a neonate, separate from the mother, while still availing itself of all the current medical technology that is available" and is 23.0 weeks and beyond, with national survival rates of 30 to 40% at 23 weeks).)

Dr. Carhart does not intentionally perform abortions after viability, a date which he says cannot be calculated purely by gestational age, but only by considering the overall health of the mother and fetus. "[W]hat's viable for one 23-week infant may not even be remotely possible . . . with another 23-week infant." If Dr. Carhart thinks a fetus is viable, he refers the patient elsewhere. (Tr. 736-38, Test. Dr. Carhart.)

Dr. Vibhakar testified that the gestational age of a fetus can be determined by ultrasound dating, last-menstrual-period dating (LMP), or in-vitro-fertilization dating. Depending upon the type of dating used, determining the gestational age of a fetus can be imprecise and could be off by up to two weeks. (Tr. 394, Test. Dr. Vibhakar.) Drs. Cook and Lockwood explained that the error range of ultrasound dating in the first trimester is plus or minus one week; plus or minus up to two weeks of gestation in the second trimester; and plus or minus up to three weeks in the third trimester. It is conventional in clinical management of pregnancies to use LMP dating, but viability is more accurately measured by ultrasound dating. (Tr. 1268-69, Test. Dr. Cook; Tr. 1679-80, Test. Dr. Lockwood.)

Dr. Doe does not attempt to determine viability as a condition of his or her medical practice. If defined as ability to survive outside the mother, Dr. Doe believes that viability is variable because the measure of gestation is "always an estimate" that depends upon the method used to measure the length of gestation, the length of a woman's menstrual cycle, and variability in measurements done by ultrasound. The ability of a fetus to survive outside the womb also depends upon its health, the health of the mother, and whether delay or trauma has occurred during delivery. (Tr. 149-151, Test. Dr. Doe.)

2. COMPARATIVE SAFETY AND NECESSITY OF PROCEDURES

The parties presented to the court a large number of witnesses and medical journal articles that expressed opinions on the comparative safety and necessity of various abortion procedures and established the existence of a medical debate regarding the safety and necessity issues. I shall describe that evidence next.

a. WITNESSES' EXPERIENCE

i. RISK OF ABORTION PROCEDURES GENERALLY

Statistics from the Centers for Disease Control ("CDC") for 1973 through 1999 reflect that 90% of all abortions are performed in the first trimester; 10% of abortions occur in the second trimester; and 1.5% of those second-trimester abortions occur after 20 weeks of gestation. (Ex. 126, Test. Dr. Westhoff 767-68.)

Dr. Paul testified that carrying a fetus to term is riskier than having an abortion as established by data from the CDC set forth in the JPSA study and the morbidity and mortality reports from 1972 through 1987 (see JPSA and Lawson article discussion, *infra*). (Ex. 125, Test. Dr. Paul 22 & 37-38.) Specifically, Dr. Paul testified that:

* Pregnancy-related mortality occurs in approximately 7 per 100,000 live births, with higher rates seen in older and African-American women. The risk of death for women over 40 is 5 times that of women under 20. (Ex. 125, Test. Dr. Paul 23 & 24.)

* Twelve hospitalizations per 100 deliveries result from pregnancy-related complications. (Ex. 125, Test. Dr. Paul 23-24.)

* Overall, the risk of death from childbirth is about 10 times greater than death from abortion. Under 16 weeks of gestation, the risk of abortion-related death is clearly less than the risk of death from carrying a pregnancy to term. At 16 weeks of gestation and higher, the risk of death associated with abortion and carrying a pregnancy to term are generally about equal. However, for older women, the risk of death from second-trimester abortion at 16 weeks or greater is lower than the risk of death from pregnancy. (Ex. 125, Test. Dr. Paul 37-38; Ex. 126, Test. Dr. Westhoff 804-05 (abortion safer than continuing pregnancy to term; risk of abortion complications increases with gestational age).)

* Based on the rate of complications, abortion is "hands down" a safer option than carrying a pregnancy to term. (Ex. 125, Test. Dr. Paul 37-38.)

Drs. Shadigian and Bowes believe that the safest and most appropriate abortion procedure for a particular woman depends upon the stage of pregnancy; the woman's health; medical contraindications of the woman; the training, skill, and experience of the physician; the woman's prior surgical history; and whether the woman or her doctor wish to remove the fetus intact for pathological testing. Even if two abortion procedures are statistically similar in terms of risk, the safety for each particular woman depends upon her individual circumstances. With respect to any medical emergency exception to a procedure ban, "a physician should be permitted to rely on his or her own best medical judgment to determine if there is an emergency." (Tr. 975-78, Test. Dr. Bowes; Tr. 1563-64, Test. Dr. Shadigian.)

According to Dr. Lockwood, the skill of the physician performing the abortion procedure and the setting in which the abortion takes place both play a role in assessing the risk of various abortion procedures. Residents have higher complication rates than do senior, more experienced practitioners. And "one would assume that [a hospital] would be a safer environment" than a clinic that does not have access to "critical care specialists, rapid transfusions, superb anesthesia." (Tr. 1722-23, Test. Dr. Lockwood.)

Dr. Broekhuizen explained that a woman decides which method of abortion is to be carried out after receiving information from her physicians. For example, as part of this informed consent, Dr.

Broekhuizen always advises his patients that cesarean section poses higher risks than either D & E or medical-induction abortion. (Ex. 120, Test. Dr. Broekhuizen 503-04.) However, the woman may choose a procedure with higher complication rates (such as cesarean section or hysterotomy) based on personal beliefs, even when a D & E is the safer option. (Ex. 120, Test. Dr. Broekhuizen 543-44.)

Dr. Lockwood testified that after 20 weeks of gestation, D & Es, intact D & Es, and medical-induction abortions are comparable in terms of safety. However, most abortions performed at or after 21 weeks are surgical abortions, as opposed to medical-induction abortions. (Tr. 1747, Test. Dr. Lockwood; Tr. 1407, Test. Dr. Cook ("[W]hen you look at various methods of doing a surgical procedure or emptying a uterus, and you get beyond 18 weeks [of] gestation, all the methods are of similar risk.").)

For each week of gestation beyond eight weeks, there is a "38% risk of increased risk of mortality." (Tr. 1708, Test. Dr. Lockwood.)

The leading complication in second-trimester abortion procedures is hemorrhage. (Ex. 123, Test. Dr. Frederiksen 1217.)

ii. DILATION

When performing his version of the D & E, Dr. Carhart tries to achieve as much dilation as possible to enable him to remove the fetus in as few pieces as possible. In his experience, this technique requires fewer instrument passes; inflicts less damage on the uterus and cervix such as perforation or developing a "false passage, which means you have somehow gotten out of the cervical canal and you're creating a new tun-

nel through the cervix or through the uterus"; decreases risk of infection; and reduces problems with uterine bleeding and hemorrhage. (Tr. 626-28, Test. Dr. Carhart.)

Dr. Vibhakar is aware of evidence that suggests that a slower preparation or dilation of the cervix decreases the risk of uterine injury in general. She is also aware that misoprostol can result in side effects such as allergic reaction, chills, nausea, diarrhea, and fever. She describes these side effects as frequent, but mild. (Tr. 366, Test. Dr. Vibhakar.)

The "generous dilation" Dr. Doe uses for his or her D & E and D & X procedures allows Dr. Doe (a) to move and manipulate the forceps in a gentle manner so he or she can accurately locate the fetal part he or she intends to grasp; and (b) to more easily, and with fewer passes, remove fetal parts through the cervix in large pieces, which reduces the likelihood of cervical damage from sharp, bony fragments and uterine perforation, allows Dr. Doe to more easily identify fetal parts so he or she can be sure the uterus has been completely emptied, and shortens procedure time, thereby reducing bleeding time. (Tr. 59-60, Test. Dr. Doe.) Dr. Doe testified that if fetal tissue is left inside the uterus, it will cause continued bleeding and possible infection, which, in turn, would require antibiotic treatment and another curettage procedure to remove the residual tissue. (Tr. 60-61, Test. Dr. Doe.)

As compared with D & E and D & X procedures using less dilation, Dr. Doe thinks that generous dilation "makes the procedure much safer and more comfortable. . . . the serious uterine injury complications that have occurred in my department over the years can almost always be linked to inadequate

cervical preparation." These serious complications include uterine perforations, injury to intraabdominal organs like the bowel or bladder, and cervical lacerations, especially those that penetrate the full thickness of the cervix and extend into uterine blood vessels. Based on regular post-operative examination of patients who had extensive dilation with laminaria and based on his or her obstetrics work with patients who had incompetent cervix, Dr. Doe does not believe that generous dilation in his or her second-trimester procedures causes cervical incompetence in later pregnancies. Dr. Doe has "had patients who had severe cervical lacerations following Prostin induction and complications secondary to that, but [he or she hasn't] seen it following a D & E procedure." (Tr. 61-63, Test. Dr. Doe.)

In Dr. Doe's experience, there is no clinically significant difference in blood loss between an intact D & E and a nonintact D & E where significant dilation of the cervix has been obtained. (Tr. 98 & 141, Test. Dr. Doe.)

Dr. Cook believes that forced mechanical dilation of the cervix in a short time frame-as opposed to dilation of the cervix caused by the normal physiologic process of uterine contractions-disrupts the "normal integrity of . . . the . . . cellular matrix or the collagenous cellular matrix of the cervix, which . . . makes up the normal architecture of the cervix." (Tr. 1356-60, Test. Dr. Cook.) However, Dr. Cook is not aware of any peer-reviewed scientific data analyzing the effects of slow, generous cervical dilation using osmotic dilators like laminaria or the use of prostaglandins to induce uterine contractions. (Tr. 1361, Test. Dr. Cook.)

Dr. Cook maintains that there "is an increasing body of evidence" that shows that people who have had first-

trimester "induced" abortions—as opposed to spontaneous abortions or miscarriages—have "a higher risk for pre-term delivery and possibly low birth weight with subsequent pregnancies." In later-term abortion procedures where there is a greater amount of cervical manipulation, Dr. Cook is concerned there would be an even greater risk for preterm labor related to cervical weakness in subsequent pregnancies, and Dr. Cook claims that "there is data to suggest this." (Tr. 1361-64 & 1433-34, Test. Dr. Cook.) To his knowledge, Dr. Cook has never cared for a woman with cervical incompetence who has previously had an intact D & E procedure. (Tr. 1434, Test. Dr. Cook.)

Dr. Creinin testified that the cervix is 80% connective tissue and 20% muscle, and the uterus is a muscle. The cervix is generally very strong, but an incompetent cervix is unable to maintain its structure under the pressure of a growing pregnancy and painlessly dilates. (Ex. 122, Test. Dr. Creinin 690-91.) In a D & E, the cervix is dilated less and over a longer period of time than with a term labor and delivery. Dr. Creinin believes there is no physiological basis for concluding that the dilation in a D & E causes cervical incompetence. He testified that there are no medical studies to support a finding that D & E dilation increases the risk of cervical incompetence, and there is no common-sense reason to expect that it should. (Ex. 122, Test. Dr. Creinin 691-92.)

Dr. Shadigian understands the intact D & E procedure to involve two days of dilation with laminaria, as well as misoprostol in some cases. Placing dilators in the wrong place can create a false tract and manipulation of a woman's body to achieve dilation over two days can cause "longer-term effects," according to

Dr. Shadigian. Dilation in a medical-induction procedure is not potentially as harmful as dilation with laminaria because, except in rare cases, "only medications that actually have the woman's body start a physiological process of contraction" are used in induction procedures. (Tr. 1530-32, Test. Dr. Shadigian.)

According to Dr. Broekhuizen, serial use of laminaria will likely increase the risk of infection due to prolonged exposure, and the insertion of laminaria may rupture the amniotic membrane and cause infection. Further, serial use of osmotic dilators may cause uterine cramping and may initiate labor. Dr. Broekhuizen believes that misoprostol causes more cramping than laminaria. (Ex. 120, Test. Dr. Broekhuizen 625-26 & 628.)

Dr. Westhoff testified that laminaria may cause uterine cramping and vaginal bleeding, similar to a menstrual period. In some cases, the patient cannot return to work and her normal daily activities. In rare cases, the woman's membranes may rupture. (Ex. 126, Test. Dr. Westhoff 999-1000). Dr. Westhoff testified that dilation with osmotic dilators is substantially slower and less than what occurs during delivery at term, thus, cervical dilation with osmotic dilators does not harm the cervix. (Ex. 126, Test. Dr. Westhoff 789-90.)

In Dr. Broekhuizen's opinion, up to 20 weeks of gestation, there is no increased risk of cervical incompetence caused by using gradual osmotic dilation and misoprostol to prepare the cervix. After 20 weeks, based on conflicting studies, Dr. Broekhuizen believes there may be a risk (albeit very low) of cervical incompetence created by the use of mechanical dilators. He stated that the level of risk after 20 weeks, if the risk exists at all, does not render the D & E procedure

unsafe in comparison with other procedures for terminating pregnancy or when weighed against the patient's reason for deciding to terminate the pregnancy. (Ex. 120, Test. Dr. Broekhuizen 545-47, 614, 624-25.)

iii. D & E BY DISMEMBERMENT

Aside from his concerns about dilation, Dr. Cook believes that the extraction portion of second-trimester D & Es and intact D & Es performed on fetuses of the same gestational age create "comparable risk[s]." (Tr. 1424, Test. Dr. Cook.)

Dr. Lockwood testified that "prior to 20 weeks, there seems reasonable evidence that D & Es are associated with fewer complications than medical abortions, and that [at] 20 weeks, medical abortions appear to be associated with fewer significant complications than D & Es." (Tr. 1746, Test. Dr. Lockwood.) Consistent with Dr. Lockwood's testimony, Dr. Frederiksen opined that beyond 22 or 23 weeks of gestation, dismemberment of the fetus is more difficult. (Ex. 123, Test. Dr. Frederiksen 1222.)

Dr. Cook pointed out that "there are some situations where the surgical method may be the preferred method" of pregnancy termination for up to 20 weeks of gestation "if the medical situation warrants it." (Tr. 1279 & 1281, Test. Dr. Cook.) For instance, Dr. Cook had a patient with an abdominal cerclage (a stitch around the cervix) who had a fetal loss and the stitch was constricting the dilation of her cervix. Dr. Cook believed that his only options were a D & E on the nonliving fetus or a laparotomy and hysterotomy. After discussion with the patient, Dr. Cook chose the D

& E because it would avoid another major abdominal surgery for the mother. (Tr. 1280, Test. Dr. Cook.)

Dr. Fitzhugh has safely performed his disarticulation D & E in the same fashion on patients and fetuses having a wide variety of health conditions and anomalies. (Tr. 286-88, Test. Dr. Fitzhugh.) He has never perforated a patient's uterus in a second-trimester procedure, but he has ruptured a patient's cervix. (Tr. 289-90, Test. Dr. Fitzhugh.) The majority of Dr. Fitzhugh's patients do not return for follow-up examinations after an abortion. (Tr. 292-93, Test. Dr. Fitzhugh.)

Dr. Knorr considers the dismemberment D & E to be a safe procedure from 20 to 24 weeks of gestation. He has rarely perforated a patient's uterus during a dismemberment D & E, and his complication rate is "very small." (Tr. 534, Test. Dr. Knorr.)

Dr. Vibhakar believes her D & E procedures are "low[-]risk." (Tr. 350, Test. Dr. Vibhakar.) Based on her experience and her understanding of the medical literature, the likelihood of encountering a complication like infection, hemorrhage, uterine perforation, or cervical laceration in performing a D & E is 1% or less. (Tr. 377-78, Test. Dr. Vibhakar.) To her knowledge, Dr. Vibhakar has not caused uterine perforation or infection by performing a second-trimester D & E, but she has had one case involving a suspected surgical laceration that caused a hemorrhage and may have required a blood transfusion. (Tr. 378-80, Test. Dr. Vibhakar.)

In Dr. Chasen's opinion, the dismemberment D & E presents a higher risk of retained fetal tissue. Even if ultrasound is used, this risk cannot be eliminated. Dr. Chasen testified that retained fetal tissue interferes

with shrinkage of the uterus which presents a risk factor for hemorrhage, and retained fetal tissue also presents the risk of infection which, on a long-term basis, may scar the uterus and result in future infertility. (Ex. 121, Test. Dr. Chasen 1590 & 1592-94.)

Dr. Doe believes that the dismemberment D & E procedure is low-risk both before and after 20 weeks. (Tr. 95, Test. Dr. Doe.) Dr. Doe has perforated a uterus in a second-trimester nonintact D & E procedure only once in his or her entire career; similarly, he or she has had only one cervical laceration requiring suture. (Tr. 97, Test. Dr. Doe.) Dr. Doe believes that, as compared with each other, the nonintact and intact D & E procedures are both low-risk. (Tr. 104, Test. Dr. Doe.)

Dr. Broekhuizen has never perforated a uterus, but has, on two occasions, been required to suture the cervix due to a cervical laceration occurring during a D & E procedure. These are the only medical injuries or complications he is aware of that were caused by the D & E procedures he has performed. In both cases, the D & E required disarticulation due to a disproportion between the size of the fetus and the limited dilation of the cervix. (Ex. 120, Test. Dr. Broekhuizen 524-25 & 578.) Dr. Paul has perforated a woman's uterus during dismemberment on two occasions. (Ex. 125, Test. Dr. Paul 73.)

Dr. Westhoff characterizes both D & E and labor induction as safe second-trimester abortion techniques with less morbidity and mortality than carrying a pregnancy to term. She believes that in the early part of the second trimester, up to 16 weeks of gestation, the uterus is less likely to respond to induction medications and the D & E is substantially safer because it is more likely to be successful. For the later part of the second

trimester, and depending on access to skilled physicians, D & E and labor induction appear to be quite similar in terms of safety, but because of the infrequency of women choosing labor induction, there is less data available to assess its safety. (Ex. 126, Test. Dr. Westhoff 809-10.)

To her knowledge, Dr. Westhoff has never perforated a uterus during a D & E. However, she has lacerated a patient's cervix and has left fetal tissue in the uterus. (Ex. 126, Test. Dr. Westhoff 792 & 879.) Over the last three years at New York Presbyterian Hospital where Dr. Westhoff is an attending physician, D & E complications included one cervical laceration and three uterine perforations. Each case involved a dismemberment D & E. (Ex. 126, Test. Dr. Westhoff 793-94.) New York Presbyterian Hospital reviews complications of procedures routinely. Although all major complications of the D & E occurred with dismemberment D & E and not intact D & E (Ex. 126, Test. Dr. Westhoff 886), the complication rates for dismemberment D & E remained well within the institution's accepted complication rates for a surgical procedure. (Ex. 126, Test. Dr. Westhoff 980-84.)

Dr. Frederiksen testified that uterine perforation, cervical laceration, and blood loss are all possible complications of the D & E. (Ex. 123, Test. Dr. Frederiksen 1192.) Further, Dr. Westhoff stated that although the grasping end of the forceps is smooth, uterine perforation may occur during a D & E if the end of the forceps punctures the uterine wall, which is very soft, or if the doctor inadvertently grasps uterine tissue with the forceps and that tissue is then torn from the rest of the uterus. (Ex. 126, Test. Dr. Westhoff 826.)

According to Dr. Clark, while risks of the D & E include perforation of the uterus,[72] cervical laceration, infection, and bleeding, the D & E is a very safe procedure, even safer than he realized before preparing to testify in this case. (Ex. 891, Test. Dr. Clark 2387, 2404-05 & 2410-11.) Further, when comparing the dismemberment D & E to the intact D & E, the purported need for less instrument passes with the intact D & E does not necessarily make the procedure safer. "[O]n a theoretical basis, yes, less passes, doesn't it make some sense that less passes might cause less problems or less jaggedy bones . . . might make it safer, I guess in some sense it makes sense. But if I drive in and out of my driveway a hundred times, if I do it properly, that really doesn't increase the risk that I am going to hit the side of the garage." (Ex. 891, Test. Dr. Clark 2387-88.)

Dr. Cook believes that performing a D & E between 22 and 24 weeks poses a more significant risk of maternal mortality than performing the procedure at earlier gestational ages. (Tr. 1418, Test. Dr. Cook.)

Dr. Lockwood is not convinced that the intact D & E is safer than the traditional D & E procedure and he believes the intact D & E procedure may have potential long-term safety concerns. (Tr. 1667-68, Test. Dr. Lockwood.) Dr. Lockwood characterizes the D & E method of abortion as relatively safe and notes that advances like cervical ripening agents and ultrasound-guided imaging have improved the performance of D & Es. He also observed that textbook descriptions and

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[72] However, Dr. Clark also testified that there is no data proving jagged bony parts pose a risk of injury when performing a D & E. (Ex. 891, Test. Dr. Clark 2394.)

articles on the procedure have "allowed people to have a more uniform approach to the procedure." (Tr. 1669-71, Test. Dr. Lockwood.)

Based on 30 years of published medical data and 15 years of experience, Dr. Hammond believes that in skilled hands, the D & E is a very safe procedure for terminating second-trimester pregnancies up to 24 weeks, and is likely the safest abortion procedure through approximately 20 weeks of gestation. (Ex. 124, Test. Dr. Hammond 541-42.) According to Dr. Hammond, some of the slight risks of the D & E include uterine perforation and infection. Specifically, Dr. Hammond testified that:

* Laminaria may cause pain and cramping. (Ex. 124, Test. Dr. Hammond 673.)

* Uterine perforation is very uncommon when performing a D & E, but it is more common than some may realize. In most cases, a small perforation causes no harm. A large perforation at the top of the uterus can cause bleeding, but it can be repaired with no long-term consequences. However, a perforation on the side of the uterus where the blood supply comes into the uterus can result in catastrophic hemorrhage. Where the hemorrhage cannot be controlled, a hysterectomy is required. (Ex. 124, Test. Dr. Hammond 567-68 & 677-78.)

* The risk of infection arising from D & Es is less than one percent due to the prophylactic use of antibiotics. (Ex. 124, Test. Dr. Hammond 688.)

* The risk associated with puncturing the fetal skull and with an additional instrument pass into the uterus are both very low. However, they are not equal and Dr. Hammond believes the physician should be entitled to choose which option is the safest for his patient. (Ex. 124, Test. Dr. Hammond 682-84.)

In Dr. Cook's opinion, terminations of pregnancy for maternal conditions that are either unique to pregnancy or exacerbated by pregnancy simply require that "the fetus and the mother are separated from one another, and that the placenta is delivered in order to facilitate the recovery process for the mother"; "[i]t doesn't require that we destroy the fetus." (Tr. 1301-02 & 1306, Test. Dr. Cook.) Similarly, Dr. Shadigian believes it is "never" necessary to "take a destructive act directly against the fetus in order to protect the health interests of the mother" when a pregnancy must be terminated previability for maternal health reasons. "The most important thing is ending the pregnancy which means delivering the baby and the placenta. Once that's accomplished, then the mom will get well spontaneously." (Tr. 1517, Test. Dr. Shadigian; Tr. 1680-81 & 1737, Test. Dr. Lockwood (death of the fetus after viability is never required to preserve the health or life of the mother because there is "no circumstance where physically killing the fetus is required to somehow magically improve the mother's health. What is required is terminating the pregnancy."); Ex. 120, Test. Dr. Broekhuizen 610-11 (not medically necessary from the standpoint of the mother to kill the fetus); Ex. 891, Test. Dr. Clark 2314-15 (first goal when woman is pregnant and ill is to treat the illness, stabilize mother's condition, and assist her in carrying fetus to term).)

Dr. Lockwood stated that there "may be an incredibly rare circumstance" in which it "would be necessary to take a destructive act against the fetus, after viability, in order to preserve the life of the mother," but he has never seen such a situation. (Tr. 1682, Test. Dr. Lockwood.) If such a situation did develop, "[t]here are methods of inducing feticide, of causing the fetus to no longer be living, that would then allow the procedure to be done." (Tr. 1688, Test. Dr. Lockwood.)

If a woman was 22 weeks pregnant with unstable bleeding in her brain and a vaginal hemorrhage that cannot be stabilized and the physician has decided that the woman's uterus must be emptied, "the approach [Dr. Cook] would think is the safest is to go and do an operative procedure to empty her uterus [abdominally] in the most expeditious manner possible which would be a cesarean delivery or hysterotomy." Performing a D & E in this situation would not be appropriate because "if a patient is having vaginal bleeding, we don't want to make a bad situation worse by doing more vaginal surgery on her." (Tr. 1404-06, Test. Dr. Cook.)

Despite never having performed an intact D & E, Dr. Cook opined that performing a D & E or intact D & E without ultrasound guidance is "not practicing contemporary obstetrics" and is "not performing [the procedure] as safely as you could." Dr. Cook believes that ultrasound "should be utilized in any procedures where you are doing intrauterine manipulations." (Tr. 1366-67, Test. Dr. Cook.)

Dr. Broekhuizen believes that the use of ultrasound reduces the risk of injuring the patient during insertion of instruments. Dr. Broekhuizen has not, to his knowledge, left fetal parts in the uterus after a D & E. With careful procedure and inspection, and the use of

ultrasound, the incidence of retained fetal or placental parts should be minimal, but it is never zero, stated Dr. Broekhuizen. (Ex. 120, Test. Dr. Broekhuizen 571-77.)

iv. INTACT D & E

(a) TESTIMONY ESTABLISHING THAT INTACT D & E HAS SAFETY ADVANTAGES AND MAY BE MEDICALLY NECESSARY IN SOME CASES

Dr. Carhart identified some of the benefits of performing a D & E by puncturing and draining the fetal skull: avoiding injury caused by sharp, bony fragments that can be exposed when rupturing the fetal skull; avoiding contamination of the patient's internal uterine cavity with the fetus's brain contents; and reducing trauma to the cervix. (Tr. 720, Test. Dr. Carhart.)

Dr. Fitzhugh would prefer to remove the fetus intact, rather than in pieces, because it is "relatively safer" in his experience; however, intact removal rarely happens in Dr. Fitzhugh's practice, and he would be required to dilate his patients with a second round of laminaria in order for intact removal to occur on a regular basis. (Tr. 248-49 & 277, Test. Dr. Fitzhugh.) With his disarticulation procedure, Dr. Fitzhugh has been required to tend to three of his former patients who found a piece of bone in their uterus via passing or ultrasound. Comparing the faster intact delivery with his routine disarticulation procedure, Dr. Fitzhugh believes that the more time a procedure takes, the more anesthesia is required, increasing the risks of aspiration, some other anesthetic risk, and bleeding. Dr. Fitzhugh does not believe that intact removal of a fetus followed by skull compression poses serious risks to women's health. (Tr. 248-50 & 256-57, Test. Dr. Fitzhugh; *see also* Ex. 122, Test. Dr. Creinin 682 (there is nothing unsafe about

removing fetus intact to the umbilicus or inserting scissors into fetal head to remove contents under direct visualization; Dr. Creinin has never had a patient who was injured or experienced a medical complication from fetus being removed intact to the calvarium); Ex. 125, Test. Dr. Paul 102-03 (although dismemberment D & E is safe, based on clinical experience and experience of colleagues, Dr. Paul believes intact D & E is safer).)

Dr. Vibhakar believes her D & E procedures are "less uncomfortable to the patient when the fetus is removed predominantly intact." (Tr. 350, Test. Dr. Vibhakar.)

When Dr. Knorr is able to bring the fetus out largely intact, the procedure is "a bit faster" than the disarticulation procedure, thereby shortening general anesthesia time. (Tr. 517-18, Test. Dr. Knorr.) Dr. Knorr does not believe that D & E procedures involving removal of the fetus intact but for the fetal skull, followed by either puncture or compression of the skull, pose serious risks to women's health. (Tr. 519, Test. Dr. Knorr.) Rather than removing a fetus in parts, Dr. Knorr's preference would be to perform a D & E with the fetus delivering intact up to the head followed by compression of the fetal head because "[i]t's easier, it goes quickly, and there is far fewer chance that you're going to be pulling sharp shards of skull through the cervix which can sometimes cause a laceration . . . . [B]ut since we are in a world where abortion is restricted in most hospitals in the United States, . . . I don't have the ability to keep the woman in the hospital overnight." (Tr. 572-73, Test. Dr. Knorr.)

Dr. Chasen believes that the intact D & E is a safer method for aborting fetuses with certain anomalies. For example, with hydrocephalus, the fluid in the fetal

brain can be aspirated and the head reduced to a size that can easily pass through the uterus. (Ex. 121, Test. Dr. Chasen 1600-01.) However, the brain of a hydrocephalic fetus can also be drained by cephalocentesis[73] to facilitate a vaginal delivery. (Ex. 121, Test. Dr. Chasen 1687-88.) For patients with cardiac disease, Dr. Chasen identified D & E as the recommended second-trimester abortion technique. (Ex. 121, Test. Dr. Chasen 1586-87.)

Although there are no studies to confirm this conclusion, Dr. Broekhuizen believes that since the intact D & E takes less time to perform than the dismemberment D & E, the intact D & E presents less risk of complications from anesthesia. Similarly, although there are no studies supporting his conclusion, Dr. Broekhuizen believes that since the intact D & E requires less instrument passes and takes less time to perform than the dismemberment D & E, the intact D & E results in less blood loss. (Ex. 120, Test. Dr. Broekhuizen 612-13.)

Dr. Lockwood testified that when a physician sets out to perform a D & E, he or she intends to make as few passes into the uterus as possible with instruments. By definition, the intact D & E involves fewer passes of instruments into the uterus. Fewer passes with instruments would mean less risk of uterine perforation, laceration, and infection. In an intact D & E procedure, the patient's uterus and cervix are less likely to be exposed to sharp fetal bone and skull fragments. (Tr. 1750-51, Test. Dr. Lockwood; Ex. 124,

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[73] "Cephalocentesis" is the "[p]assage of a hollow needle or trocar and cannula into the brain to drain or aspirate . . . the fluid of a hydrocephalus." *Stedman's Medical Dictionary* 321 (27th ed. 2000).

Test. Dr. Hammond 564, 567-70, 656, 678 (intact D & E involves fewer instrument passes and reduces likelihood of cervical laceration from removing sharp bony fragments through cervical opening; although it is logical to believe there is less risk of perforating the uterus if there are fewer instrument passes, there is no medical data to support this belief; Dr. Hammond has perforated a uterus during a D & C and a dismemberment D & E, and has lacerated a patient's cervix performing an intact D & E).)

Dr. Chasen believes that the intact D & E "offers safety advantages" over the dismemberment D & E. (Ex. 121, Test. Dr. Chasen 1588-89.) The use of grasping forceps poses the risk of grasping the uterine wall and uterine perforation, even when performed with ultrasound guidance. Dr. Chasen testified that dismemberment D & E requires multiple passes and therefore multiple exposures to the risk of uterine perforation. Uterine perforation can cause hemorrhage or infection, and if it is not recognized, the forceps may pass through the perforation, and the bowel and bladder may be injured. Uterine perforation poses a risk of death. (Ex. 121, Test. Dr. Chasen 1590-91 & 1606.)[74]

Dr. Paul stated that an intact D & E avoids the risk of having the fetal calvarium trapped in the uterus, a circumstance which requires the doctor to search the uterus with a forceps to retrieve the fetal head, thereby

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[74] Dr. Chasen has been sued for malpractice in connection with uterine perforation occurring during a dismemberment D & E procedure. Upon review by the hospital quality assurance committee, uterine perforation was considered a statistically occurring event even with no deviation from the standard of medical care. The case was settled. (Ex. 121, Test. Dr. Chasen 1591 & 1595.)

presenting a risk of uterine perforation. (Ex. 125, Test. Dr. Paul 123-25.)

Dr. Hammond believes the intact D & E is a very safe procedure and the safest variant of the D & E. (Ex. 124, Test. Dr. Hammond 563.) He testified regarding the following advantages of the intact D & E:

* *The intact D & E provides for more surgical control due to more direct visualization of the fetus during the procedure.* The risk of perforating the uterus and injuring the cervix is less if the doctor is not required to grope blindly in the uterus with a forceps to remove dismembered fetal parts, particularly the dismembered fetal head. Dismembered fetal parts can be pushed by the forceps or something else in the uterus through the uterine wall. (Ex. 124, Test. Dr. Hammond 568-69 & 592.)

* *There is less likelihood of retained fetal parts with the intact D & E.* When Dr. Hammond removes an intact fetus, he is confident that the fetal parts are removed. When the fetus is dismembered, he must exercise his best judgment to determine if he has removed all the fetal parts. He will generally investigate the fetal parts removed to determine if he has retrieved the sentinel parts: all four limbs and the fetal head. However, in cases of fetal anomalies, the fetus may lack anatomical landmarks commonly used by the doctor to determine if the fetus is completely extracted. Retained fetal tissue increases the risk of infection and hemorrhage. (Ex. 124, Test. Dr.

Hammond 566, 570-71, 671-72.) Ultrasound is occasionally used as an adjunct to assist in determining whether all fetal parts have been removed, but it is not a definitive tool. The primary way of assuring the uterus is empty is for the operator to know how an empty uterus should feel and knowing when it feels like something has been retained. (Ex. 124, Test. Dr. Hammond 572.)

* *The intact D & E decreases the time in the operating room* because the doctor is not required to make several instrument passes to complete removing the fetus. A shorter operating time decreases the patient's exposure to anesthesia, the risk of anesthesia-related complications, and the risk of bleeding. A shorter evacuation time causes less bleeding. Once the uterus is empty, it can contract and stop the bleeding, but while the dismemberment D & E proceeds, bleeding is often occurring. (Ex. 124, Test. Dr. Hammond 566-67 & 574-75.) The risk of excessive bleeding in all D & E procedures is 1% or less. The majority of bleeding that occurs in a D & E is caused by removing or detaching the placenta, though bleeding may rarely be caused by cervical laceration or uterine perforation. (Ex. 124, Test. Dr. Hammond 687-88.)

In Dr. Chasen's view, it is much easier and safer to collapse the fetal head using the intact D & E procedure than to crush the skull with forceps, as required in the dismemberment D & E procedure. The intact D & E procedure poses no risk of hitting the bowel with the scissors used to puncture the skull, and fetal dismem-

berment and crushing the skull may create sharp bony edges that may damage the cervix when expelled. Dr. Chasen observed that it is possible to use nitroglycerin to enable the forceps to fit around the head and eliminate the need to crush the fetal skull, but in Dr. Chasen's practice, the woman's uterus is already relaxed by sedation and anesthesia. Further significant relaxation of the uterus with nitroglycerin is doubtful, and if it does occur, it could persist after the abortion and expose the woman to a risk of hemorrhage. Moreover, nitroglycerin can affect the cardiovascular system and make the mother's pulse race and blood pressure drop. (Ex. 121, Test. Dr. Chasen 1590, 1592, 1597, 1599-1600.)

Dr. Chasen views the intact D & E procedure as quicker with less risk of hemorrhage. Dr. Chasen testified that avoiding the risk of hemorrhage is especially important for women with clotting problems caused by metabolic conditions, inherited disorders, cancer and associated chemotherapy, and uterine infection. Further, reducing the woman's exposure to forceps inserted into the uterus reduces the risk of uterine rupture and disrupting the placenta, thereby reducing the risk of hemorrhage. (Ex. 121, Test. Dr. Chasen 1607-08.)

During 20 to 24 weeks of gestation, Dr. Lockwood identified the available abortion options as D & E, medical induction, intact D & E, and hysterotomy. According to Dr. Lockwood, scientific and medical literature establishes that medical induction and D & E by dismemberment are safe methods of abortion from 20 to 24 weeks. Further, the Chasen study, discussed below, "suggests" that the intact D & E method of abortion is "safe" during 20 to 24 weeks of gestation.

While intuitive or anecdotal evidence regarding the safety of the intact D & E cannot "firmly establish [the] procedure as an acceptable and preferred alternative clearly," there are "compelling enough arguments as to its safety, that [Dr. Lockwood] certainly would not want to prohibit its use in [his] institution." (Tr. 1704-06, Test. Dr. Lockwood.)

Based on her experience, Dr. Fredericksen believes the intact D & E is always safer than the dismemberment D & E for the following reasons:

* *Intact removal of the fetus ensures that fetal tissue is not retained and the placenta can be removed virtually intact.* Dr. Frederiksen testified that retained fetal and placental tissue increases the risk of infection. Infection can cause post-abortal uterine hemorrhage. Retained tissue can result in Asherman's syndrome, which is associated with procedures requiring multiple curettage of the endometrial tissue and associated infection. Asherman's Syndrome affects the patient's future reproductive health because it affects or eliminates menstrual periods, and the uterine scar tissue that develops may be so encompassing that embryo implantation is impeded. (Ex. 123, Test. Dr. Frederiksen 1045, 1060, 1062-64; *see also* Ex. 125, Test. Dr. Paul 72-73 (intact D & E permits doctor to readily know whether all fetal parts have been removed from uterus; retained fetal tissue can cause infection and bleeding, and this risk not eliminated with use of ultrasound).) Ultrasound and a suction curette are used by physicians to determine if the uterus is empty, but even with these

procedures, fetal and placental tissue may be retained. (Ex. 123, Test. Dr. Frederiksen 1218-19.)

* *The intact D & E procedure is shorter.* Dr. Frederiksen stated that as physicians have improved the procedure to remove the fetus more intact, the total time necessary to ensure that the uterus contracts and is empty has become less. The shorter operating time results in less blood loss, less anesthesia time, less pain, and less risk of exposure to infection. (Ex. 123, Test. Dr. Frederiksen 1064-66, 1234; *see also* Ex. 125, Test. Dr. Paul 68 & 73 (dismemberment D & E takes, on average, 10 to 15 minutes, whereas intact D & E can be completed in less than 2 minutes; quick evacuation of uterus limits bleeding and shortens woman's discomfort; until uterus is fully evacuated, it cannot contract to stop the bleeding from the detached placenta); Ex. 126, Test. Dr. Westhoff 826-27 & 836 (intact D & E has shorter operating time than dismemberment D & E, with shorter exposure to anesthesia and lower risk of hemorrhage).)

* *There are less passes of instruments into the uterus.* With less instrument passes, there is less risk of perforating the uterine wall and delivering maternal tissue. Dr. Frederiksen explained that due to irregularities in the thickness of uterine walls, including those created by scar tissue, a doctor may believe the forceps has grabbed fetal tissue, but the tissue may actually be uterine or uterine scar tissue.

While uterine perforation is a low-risk complication, it presents an emergency situation mandating exploration of the maternal abdomen to repair any damage to the bowel or other maternal tissues. Abdominal surgery increases the risk of wound infections, and depending on the extent of the damage caused by the perforation, there may be bowel spillage, damage to the ovaries and fallopian tubes, and internal hemorrhage. Dr. Frederiksen has perforated the uterus while performing a dismemberment D & E.[75] (Ex. 123, Test. Dr. Frederiksen 1045, 1053, 1055-60; *see also* Ex. 125, Test. Dr. Paul 68-70 (goal is to use as few instrument passes as possible because every instrument pass presents a small risk of lacerating the cervix or perforating or lacerating the uterine wall; risk exists even when ultrasound used); Ex. 126, Test. Dr. Westhoff 824-25 (intact D & E safer than dismemberment D & E because of less instrument passes into the uterus which reduces or possibly eliminates risk of uterine perforation and cervical laceration; dismemberment results in bony fragments which may cause perforation and laceration; in dismemberment D & E, fetal and placental tissue may be retained and cause infection or hemorrhage).) Dr. Frederiksen does not know of any studies comparing the extent of blood loss in intact and dismember-

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[75] Dr. Frederiksen was sued for alleged malpractice in perforating a patient's uterus during a dismemberment D & E. The case was tried to a defense verdict. (Ex. 123, Test. Dr. Frederiksen 1056.)

ment D & Es. (Ex. 123, Test. Dr. Frederiksen 1216-17.)

* *The intact D & E creates less bony parts or fragments that can lacerate the cervix when delivered.* According to Dr. Frederiksen, a cervical laceration can nick an internal branch of the cervical artery as well as lacerate the endocervical canal and cause bleeding. The leading cause of cervical laceration and hemorrhage is delivery through the cervix of sharp, bony pieces created during the dismemberment D & E. A laceration of the cervical artery of the internal os characteristically causes an episodic hemorrhage or one that cannot be identified during a patient examination. A cervical laceration may also necessitate abdominal surgery. The risk of cervical laceration is present but lower with intact D & E procedures. (Ex. 123, Test. Dr. Frederiksen 1053, 1058-61, 1213, 1215; *see also* Ex. 126, Test. Dr. Westhoff 834 (for patients with serious underlying medical conditions such as heart disease, sickle cell anemia, or organ transplant, medical complications may have more catastrophic outcomes and should be avoided; such patients have the most to gain from intact D & E which reduces likelihood of complications that would be unusually risky to women with serious medical problems).) Dr. Frederiksen does not know of any studies comparing the risk of injury from bony parts arising from intact and dismemberment D & Es. (Ex. 123, Test. Dr. Frederiksen 1214-15.) The cause of cervical laceration is not always

known. (Ex. 123, Test. Dr. Frederiksen 1214-15.)

In Dr. Frederiksen's opinion, there is never a clinical reason to choose a dismemberment D & E procedure over removing the fetus as intact as possible. (Ex. 123, Test. Dr. Frederiksen 1139.) Moreover, an intact D & E may be safer for women with certain medical conditions because there is less risk of a prolonged procedure, lacerating the cervix, hemorrhage, retained tissue, and infection. Dr. Frederiksen identified specific examples of medical conditions warranting an intact rather than a dismemberment D & E and the reasons for her opinion:

* *Women with sepsis.* A patient who is septic, either with chorioamnionitis or infection of the uterus, may be hemodynamically unstable; that is, in shock with a very low blood pressure and a very high pulse. The lack of cardiac output decreases blood to the kidneys, lungs, and other organs causing metabolic acidosis (a change in the acid/base balance [pH] of the maternal bloodstream). This arises because, without adequate blood profusion through the tissues, the acid and waste products created by living maternal tissues cannot be removed from the body. Metabolic acidosis can lead to disseminated intravascular coagulation, a disease process which interferes with clotting because the clotting factors and platelets in the maternal body, the raw materials for clot formation, have been used up. These patients have an increased risk of maternal hemorrhage. In this circumstance, the intact D & E is the optimal way to empty the uterus because it decreases the risk of

cervical laceration and hemorrhage and shortens the procedure time for a patient facing potential multiorgan failure. (Ex. 123, Test. Dr. Fredériksen 1141-45; *see also* Ex. 124, Test. Dr. Hammond 588-90 (in patients with chorioamnionitis, the pregnancy must be delivered; patients with infected uterus have higher risk of uterine perforation because uterine wall is not healthy and does not have its usual rigidity; more importantly, manipulating interior of infected uterus with multiple instrument passes may seed infection from uterine lining into bloodstream causing sepsis).)

* *Women with acute fatty liver of pregnancy.* When an inborn error of metabolism exists that prevents the fetus and placenta from metabolizing long-chain fatty acids, these fatty acids accumulate and are then transferred to the maternal cardiovascular system for excretion. The fatty acids deposit in the mother's liver, resulting in acute liver failure, which in turn may cause renal failure or kidney failure. Liver failure may also cause a low platelet count, low concentrations of clotting factors, and disseminated intravascular coagulation. Once the woman presents with acute fatty liver disease, there is no available treatment other than delivering the fetus. If acute fatty liver disease occurs during the second trimester, labor induction is a poor option because the mother is very ill and the prolonged procedure increases the risk of renal failure. (Ex. 123, Test. Dr. Frederiksen 1145-47.) Either an intact or a dismemberment D & E can be performed on women

with acute fatty liver disease. (Ex. 123, Test. Dr. Frederiksen 1226.)

Dr. Hammond explained why he believes the intact D & E is a safer abortion procedure for women with bleeding disorders and heart problems:

* *Bleeding disorders.* Avoiding the risk of uterine perforation and cervical laceration is important in women with inherited, acquired, or pregnancy-related clotting problems due to insufficient clotting factors or platelets. Thrombocytopenia (low platelets) may arise as a result of pregnancy, and low platelets may be associated with HELLP syndrome, preeclampsia, and toxemia. (Ex. 124, Test. Dr. Hammond 586-88 & 594-95.) Unlike the unpredictability of induction abortion, the time period when evacuation of uterine contents is to occur is scheduled in a D & E procedure. The patient can be given platelets or medications to assist with clotting, both of which will help for only the short time after they are administered. (Ex. 124, Test. Dr. Hammond 593-94.)

* *Heart problems.* In patients with underlying valvular heart disease or cardiomyopathies,[76] hemorrhage presents a heightened risk of death. These patients do not tolerate fluid shifts, and what may be a minor problem in a healthy patient is a major problem in these patients. Any risk of hemorrhage from cervical laceration and

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[76] Cardiomyopathy is the "[p]rimary disease process of heart muscle in absence of a known underlying etiology." *Stedman's Medical Dictionary* 290 (27th ed. 2000) (quoting World Health Organization).

uterine perforation should be avoided, and a predictable 20-minute surgical procedure with scheduled anesthesiologist and cardiologist assistance is preferred. (Ex. 124, Test. Dr. Hammond 590-93.)

(b) TESTIMONY ESTABLISHING THAT INTACT D & E IS NOT MEDICALLY NECESSARY, IS NOT THE SAFEST, AND IS NOT THE ONLY ABORTION OPTION

Dr. Shadigian can identify no circumstances "in which the D & X procedure would be the only option to save the life or preserve the health of the woman." (Tr. 1597-98, Test. Dr. Shadigian.) Similarly, Dr. Bowes has never "seen any situation where [he] perceived the need to use an intact D & E" or where he "perceived any advantage to using an intact D & E over other methods of abortion." (Tr. 920, Test. Dr. Bowes.)

Dr. Sprang has never "seen a situation where a D & X would be the safest, the best, or the only procedure to use to protect the health of the mother." In fact, he cannot identify "any indications . . . where a D & X would be the thing to do." Dr. Sprang believes it is never necessary to perform an intact D & E, or D & X, on a living fetus during the second trimester because "there is both induction and D & E." According to Dr. Sprang, even if one could fathom a situation in which the intact D & E would be preferable, the operator could "cut the cord" at the beginning of the procedure "[a]nd, obviously, the baby would exsanguinate,"[77] or use "intrafetal Digoxin or potassium chloride." Such

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[77] To exsanguinate is to "remove or withdraw the circulating blood; to make bloodless." *Stedman's Medical Dictionary* 633 (27th ed. 2000).

injections are "becoming more and more common in the medical community" and Dr. Sprang's institution has a policy that every patient who undergoes a D & E gets a intrafetal injection that causes "immediate death" of the fetus. Dr. Sprang testified that studies have shown such injections to be safe for the mother, and physicians at his institution have already successfully used the technique for selective reduction procedures-that is, when one or more fetuses in a multiple pregnancy are injected so the mother can carry the remaining fetuses to term. "[F]rom ethical points of view, . . . if you kill the fetus in the uterus, none of these issues are there." (Tr. 1162-70 & 1171-72, Test. Dr. Sprang.)

Despite never having performed an intact D & E, Dr. Sprang believes from his general OB/GYN experience and training, and his review of medical literature, that the intact D & E procedure presents a "significant risk to the woman." Specifically, Dr. Sprang believes that the two-day dilation period presents a risk of infection because "[b]acteria have a better chance [of] moving along the laminaria and getting inside the endocervical os and running a risk of infection, because they are in contact with the vagina, and up against the amniotic sack." Dr. Sprang also testified that if mechanical dilation is used along with laminaria, the patient risks an incompetent cervix later-that is, a cervix that cannot hold a subsequent pregnancy to term. Further, performing an internal podalic version as part of an intact D & E creates a greater risk of uterine rupture. Finally, using sharp instruments on the fetal skull "blindly in a very vascular area" creates a risk of cervical laceration. (Tr. 1148-55, 1161-62, 1164, Test. Dr. Sprang; Tr. 1358, Test. Dr. Cook (multiple insertions of laminaria increase risk for infection).) Dr.

Sprang admitted that he uses mechanical dilators and laminaria to perform D & Cs and second-trimester inductions; the risks of infection and trauma to the cervix are present with just one insertion of laminaria; and the causes of cervical incompetence are not well understood. (Tr. 1179-84, Test. Dr. Sprang.)

Dr. Sprang noted that the intact D & E "process is clearly continually changing." For instance, using Cytotec may reduce trauma to the cervix in the dilation process, and using ultrasound during the procedure makes the procedure safer with respect to trauma caused by "grasping" and determining whether the physician has left "any fetal parts in there." (Tr. 1153-57, Test. Dr. Sprang.)

Dr. Cook believes that the intact D & E, or D & X, procedure "is never medically necessary, in order to safely evacuate a uterus, and . . . it is not even necessarily the preferred method." Dr. Cook defines "medically necessary" as necessary "to preserve the life of the mother or to improve upon her medical condition over and above any other readily-available and commonly-used alternatives." According to Dr. Cook, the intact D & E procedure "doesn't add anything to existing medical options that are already safely and readily available for the mother for ending her pregnancy or evacuating her uterus"; the procedure does not "facilitate[ ] our ability to empty a uterus in that it is still a multiple-day procedure, in less than an optimally-monitored situation"; and "it's an inhumane way to deliver a fetus." (Tr. 1299-1300 & 1390-91, Test. Dr. Cook.)

Dr. Clark testified that regardless of gestational age, the intact D & E is never necessary to preserve the life or health of the mother. "Under no circumstance

would the abolition of this procedure in any way jeopardize the life or health of any mother regardless of what medical condition she may have." (Ex. 891, Test. Dr. Clark 2311 & 2313.) Dr. Clark further testified that:

* There is no medical literature to support a claim that the intact D & E would be necessary to preserve the life or health of the mother. "There are always equally if not more safe alternatives that do not involve D & X." (Ex. 891, Test. Dr. Clark 2377-78.)

* There are no publications analyzing the long-term safety of the intact D & E. The Chasen article (discussed below), when analyzed, confirms what doctors have suspected-an "incredibly disturbing" rate (a three-fold increase) of preterm birth in women who have previously had an intact D & E. (Ex. 891, Test. Dr. Clark 2311, 2388-89, 2394.) Premature birth accounts for more morbidity and mortality than any other single condition in all of obstetrics and pediatrics, and a woman who has previously experienced a preterm delivery is at a higher risk of preterm delivery in later pregnancies. (Ex. 891, Test. Dr. Clark 2393 & 2412.)

* The risks associated with the intact D & E are absolutely unknown. However, the Chasen article may indicate that the extent of dilation in the intact D & E increases the risk of premature birth. (Ex. 891, Test. Dr. Clark 2386.)

Dr. Cook maintains that the intact D & E "may entail unforeseen and unnecessary risk both immediately and in the future . . . whether we are dealing with a healthy mother and a healthy fetus, or a sick mother

and/or a sick fetus." He believes that various elements of the intact D & E procedure "have an unacceptable either immediate or potential later risk associated with them," including "over distension" of the cervix that may compromise the patient's later ability to maintain a pregnancy and conversion of the fetus within the uterus which increases the risk of maternal injury and is a technique "generally . . . abandoned in the practice of modern obstetrics."[78] (Tr. 1299 & 1341-42, Test Dr. Cook.) Dr. Cook characterizes the risks of performing an internal podalic version of the fetus to the breech position as perforation of the uterus, trauma to the uterus, bleeding, and infection. (Tr. 1364-65, Test. Dr. Cook.)

Many of the witnesses appearing before the court in this case testified regarding specific maternal physical health conditions and whether the intact D & E procedure is medically necessary, the safest, or the only abortion option available for women with these health conditions.

Dr. Cook knows of no maternal physical health conditions that could create a medical need to perform the intact D & E procedure to terminate a pregnancy prior to fetal viability. "I have been involved in this process and these discussions for a number of years, and . . . I have considered many scenarios, and I have yet to come across a single case where I see it's necessary, medically or otherwise, to do a partial-birth abortion." (Tr. 1307 & 1327, Test. Dr. Cook.) Specifi-

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[78] The intact D & E procedure also concerns Dr. Cook because of patient discomfort and lack of patient monitoring during two days of dilation and "the method in which a baby's life is taken, when it's virtually completely delivered, then has its . . . brains sucked out of its head." (Tr. 1342, Test. Dr. Cook.)

cally, Dr. Cook testified that the intact D & E procedure is not medically necessary in the following circumstances:

* *Preeclampsia:* According to Dr. Cook, intact D & E is not necessary to terminate the pregnancy in this situation because "there are other better options available that . . . are readily accessible to most practitioners that would allow a safer completion of the delivery process, while still maintaining the option for the best outcome for the fetus." Between 20 and 23 weeks, Dr. Cook would administer medications to get the fetus to viability, then deliver the fetus vaginally or by cesarean. If the situation is not being controlled, Dr. Cook would proceed with medical induction of labor with careful monitoring of the mother's health status. Surgical termination of pregnancy for preeclampsia between 20 and 23 weeks is not indicated because preeclampsia is an abnormality of the vascular system which predisposes one to low platelets, clotting difficulties, and increased bleeding. (Tr. 1307-10, Test. Dr. Cook.)

* *Renal Disease:* In Dr. Cook's view, intact D & E would never be necessary to terminate a pregnancy for renal disease because "there are other safer and readily available options that are present. In addition, a woman that has an underlying severe renal condition is also not a woman who can tolerate significant blood loss, loss of fluid, need for fluid replacement, and other situations that would be I think just too high a risk to proceed with a surgical evacuation in the later second trimester." (Tr. 1310-11, Test. Dr. Cook; Tr. 1688-89; *see also* Test. Dr. Lockwood

(cannot see reason why intact D & E would be necessary to terminate previable pregnancy for renal disease); Ex. 891, Test. Dr. Clark 2368-71 (except in the case of toxemia of pregnancy,[79] pregnancy does not negatively affect kidney function and does not necessitate aborting fetus; toxemia can require termination of pregnancy to save mother's life; unless available platelets or clotting factors are very low, either labor induction or dismemberment D & E are appropriate second-trimester abortion techniques for women with underlying kidney disorders).)

* *Cardiac Disease:* Dr. Cook testified that conditions that might necessitate early termination of pregnancy include pulmonary hypertension; shunting of blood in the opposite direction of its usual course, causing problems delivering adequate oxygen to the patient's tissues; and dilation of the aorta as part of a condition known as Marfan's Syndrome. The intact D & E procedure would never be medically necessary for patients having any of these cardiac conditions, nor would it be "the preferable way to go or even an [ ] equivalent option." It is "unacceptable" to use a surgical abortion procedure late in the second trimester under circumstances where possible perforation, bleeding, infection, and other complications would not be well-tolerated by the mother. In addition, the use of epidural anesthesia in induction procedures allows the woman to remain awake, alert, and able to report

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[79] Toxemia is a term used to describe preeclampsia and eclampsia. Eclampsia is similar to preeclampsia, but the disease has advanced to include seizures. (Ex. 891, Test. Dr. Clark 2370-71.)

chest pain, shortness of breath, or other symptoms. The need to carefully monitor the mother's pain sensation and her hormonal stress responses, both of which can further complicate her underlying cardiac condition, requires proceeding with an abortion method "that is as physiologic as normal, as controlled and as gentle a process as possible." While the induction method can impose physiological stress on the mother, use of epidural anesthesia, cardiovascular monitoring, and evaluation of fluid input and output makes the induction method more "normal," "physiologic," and "gentle." (Tr. 1311-16, Test. Dr. Cook (also testifying that he would use medical induction to terminate pregnancy in patient with preexisting cardiomyopathy); *see also* Tr. 1697-98 & 1700, Test. Dr. Lockwood (intact D & E, D & E, and medical induction all "acceptable" and "reasonable" methods to safely terminate pregnancy prior to viability for peripartum cardiomyopathy and pulmonary hypertension).)

* *HELLP Syndrome:* Dr. Cook stated that HELLP syndrome, a variant of severe preeclampsia, may be an indication for termination of pregnancy prior to viability. The intact D & E procedure would never be necessary to terminate a pregnancy involving this condition because there are "safer readily available options." This condition involves low platelet counts and a high risk for bleeding complications. "So anything that we think would potentially increase the risk for a bleeding complication, perforation, hemorrhage . . . would be something we would

want to avoid at all costs." (Tr. 1316-18, Test. Dr. Cook; *see also* Tr. 1694-95, Test. Dr. Lockwood (better approach for HELLP syndrome is medical termination because patient has low platelet count and physician should avoid risk of uterine perforation and cervical laceration); Tr. 106-08, Test. Dr. Doe (neither D & E nor intact D & E would be indicated for a woman suffering from HELLP syndrome; in his or her former obstetrics practice, Dr. Doe would induce labor, if appropriate, in cases of preeclampsia, and if the labor did not progress satisfactorily or could not be expected to work in time, he or she would perform a cesarean section); Ex. 891, Test. Dr. Clark 2339-45 & 2349-50 (surgical abortion procedure should not be performed on woman with very low platelet count or severe lack of clotting factors, including women with HELLP syndrome, inherited clotting disorders, or acute fatty liver of pregnancy; any possibility of bleeding caused by surgery must be avoided, and labor induction should be performed; however, if platelets or clotting factors are not significantly low and risk of uncontrolled bleeding is not significant, either labor induction or dismemberment D & E could be performed).)

* *Leukemia:* In the rare cases in which leukemia is an indication for early termination of pregnancy, Dr. Cook believes the intact D & E procedure is never medically necessary to terminate the pregnancy because there are other safer alternatives. Further, this condition involves low platelets and depressed blood counts if the patient is receiving chemotherapy, so Dr. Cook

would want to avoid anything that would increase the risk for hemorrhage, bleeding, and perforation, as would a surgical termination. (Tr. 1318-19, Test. Dr. Cook; *see also* Tr. 1698-99, Test. Dr. Lockwood (medical induction would be preferable to surgical termination of previable fetus if patient had low platelet count).)

* *Infection:* The intact D & E procedure would never be medically necessary to terminate a pregnancy in a woman who had a severely infected uterus because a surgical termination "would potentially increase the risk for seeding or allowing extension of infection into the general maternal vascular system because of the instrumentation involved, and the risk . . . for bleeding and perforation. So we would not like that contained infection to have access either to her intraabdominal area, peritoneal cavity or to her vascular system." (Tr. 1321, Test. Dr. Cook; *see also* Tr. 1695-96, Test. Dr. Lockwood (woman with infected uterus would generally already be in labor because infection triggers labor; because cervix is already dilated, physician could continue medical termination or do D & E; may be theoretical advantage to doing intact D & E if uterine wall was damaged and thinned, but there is "no data to drive that"); Ex. 891, Test. Dr. Clark 2346-48 (in cases of uterine infection or chorioamnionitis, either labor induction or dismemberment D & E are generally appropriate methods for second-trimester abortions; if infection has substantially reduced available platelets and clotting factors, labor induction preferred; labor induction usually performed

when uterus infected because infection itself often induces labor).)

* *Breast Cancer:* Dr. Cook opined that it would never be necessary to use the intact D & E procedure to terminate the pregnancy of a woman with breast cancer who has opted to end her pregnancy and begin cancer therapy. Women with malignancies "as part of their disease process, commonly [have] severe anemia and . . . very low platelets and other conditions that . . . would not allow a woman to tolerate a surgical procedure, particularly a riskier surgical procedure, meaning that done at later gestational ages." (Tr. 1322-23, Test. Dr. Cook; *see also* Ex. 891, Test. Dr. Clark 2372-73 (cancer itself does not require termination of pregnancy, but termination may be medically indicated to surgically or chemically treat mother's cancer; either labor induction or dismemberment D & E are appropriate second-trimester abortion techniques for mother with cancer).)

* *Emergencies:* In an emergency situation in which a pregnancy must be ended as quickly as possible, Dr. Cook believes that an intact D & E procedure would not be appropriate because "other available options, both medical and surgical, that have been available for a long period of time, can be done safely. Patients have ready access to those procedures." Further, if a physician is in an emergency situation, the intact D & E would not be possible because of the two-day cervical-dilation process involved. (Tr. 1327-28, Test. Dr. Cook.) However, Dr. Cook admitted that "there could be a scenario that would arise

> in the early or mid second trimester where we feel the [mother's] condition had deteriorated to the point we can no longer treat the mother effectively. And if she is in danger, then I would not have an objection . . . to proceed[ing] in any manner I felt was necessary in order to deliver her baby and allow her to recover. And if that included D & E on a baby that was still living at that time, then that would be what we would have to do." (Tr. 1329, Test. Dr. Cook.)

Dr. Clark agrees that there are no cases where an intact D & E is preferable to a dismemberment D & E or medical induction. (Ex. 891, Test. Dr. Clark 2313-14.) He also agrees with Dr. Cook that maternal cardiac conditions do not justify the intact D & E procedure. Dr. Clark has published many articles and written textbook chapters on the issue of cardiac complications in pregnancy. Either labor induction with adequate pain relief by epidural or a dismemberment D & E can be used to terminate a second-trimester pregnancy when the mother has cardiac problems. Although some doctors have argued that the intact D & E is appropriate because of the cardiac risk posed by the fluid shift experienced by women in labor, this fluid shift occurs when the woman retains fluid in the lower extremities when carrying a term pregnancy. Fluid shift concerns do not arise with second-trimester abortions, and any cardiac concerns raised by the pain of labor are ameliorated by administering an epidural. (Ex. 891, Test. Dr. Clark 2319-25 & 2328-29.)

According to Dr. Clark, the intact D & E offers no benefit over a dismemberment D & E in the context of a mother's cardiac health. (Ex. 891, Test. Dr. Clark

2328-29.)[80] Noting that there are no sufficient studies concerning the relative risk of the intact D & E, Dr. Clark opined that using an unstudied procedure is irresponsible, especially in the context of women with cardiac conditions who are more susceptible to complications. (Ex. 891, Test. Dr. Clark 2329-30.)

Dr. Clark testified that a woman suffering from cardiomyopathy in her second trimester may be treated in a manner that permits her to carry and vaginally deliver the fetus at term, although the pregnancy is difficult. However, some cardiomyopathies are severe or do not respond to treatment, and an abortion is necessary to save the mother's life. In such cases, Dr. Clark testified that either a dismemberment D & E or medical induction are appropriate abortion methods. (Ex. 891, Test. Dr. Clark 2332-34.) The risk of blood loss from, for example, perforating the uterus may be life-threatening to the mother. In cardiac patients, Dr. Clark prefers vaginal rather than cesarean delivery of the term infant. (Ex. 891, Test. Dr. Clark 2325-26.)

Dr. Doe cannot identify a specific maternal physical health indication for which an intact D & E would be necessary because of that physical health condition. (Tr. 103-04, Test. Dr. Doe; *see also* Tr. 1514, Test. Dr. Shadigian (necessity to terminate previable pregnancy for maternal health reasons is "uncommon"); Tr. 1687-88, Test. Dr. Lockwood ("generally not" necessary to

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[80] The actual question was, "Can you think of any circumstances in which D & X would be necessary to preserve the health of a cardiac patient?" The response was that the mother's hormone levels and blood supply would be similarly affected by the dismemberment and intact D & E. The doctor's answer did not address the risk of maternal complications involving any organ (including the cervix or uterus) other than the heart.

perform an intact D & E on a previable fetus to protect maternal health; "safe and effective ways exist to terminate a pregnancy for a maternal health reason prior to viability without the need to resort to the D & X procedure on a living fetus"; pregnancy termination for severe preeclampsia, renal disease, placenta previa, and HELLP syndrome does not necessitate performance of a D & X).)

According to Dr. Lockwood, an intact D & E is not medically "necessary" postviability to preserve the health of the mother because "[b]y definition, any procedure that . . . requires the intentional killing of the fetus isn't going to improve the mother's condition." (Tr. 1681, Test. Dr. Lockwood.)

Dr. Shadigian cannot "think of a situation" constituting a "medical need to use the D & X procedure to terminate a pregnancy . . . because of a particular type of health condition that the mother is facing in the pregnancy." In her opinion, there are safe and effective ways to terminate a pregnancy for maternal health reasons without using the intact D & E, or D & X, procedure-the disarticulation D & E procedure and medical induction "with many different kinds of medicines that have both been well studied." (Tr. 1517-18, Test. Dr. Shadigian.) Further, the intact D & E would not be an appropriate procedure when maternal health is rapidly deteriorating because "it takes so many days to treat the cervix ahead of time and get the body prepared for the actual procedure itself." (Tr. 1518, Test. Dr. Shadigian.)

As with maternal medical conditions, Dr. Cook has "not found a single fetal condition" that would medically necessitate use of the intact D & E to terminate a pregnancy. Dr. Cook believes it is not necessary to

destroy a fetus that has an abnormality because such anomalies rarely affect mater al physical health interests. If a fetal anomaly did create high blood pressure in the mother, for example, "[y]ou just need to separate the fetus and the placenta from the mother," not destroy the fetus. (Tr. 1330-31 & 1334, Test. Dr. Cook.) Dr. Cook described a much-discussed fetal condition that would not necessitate, in his opinion, use of the D & X procedure to terminate the pregnancy:

* *Hydrocephaly:* Dr. Cook explained that hydrocephaly is distention of the ventricular system in a baby's brain, which is the fluid-filled canal system within a fetus's central nervous system. If the canal system becomes overly distended due to a blockage or overproduction of cerebral spinal fluid, hydrocephaly occurs which, in its most extreme form, can lead to macrocephaly, a large fetal head. In the rare instances involving macrocephaly, Dr. Cook performs an intrauterine procedure to decompress the ventricular system. A needle is surgically placed into the distended ventricular system in order to aspirate some of the fluid to make the head small enough to allow for vaginal delivery. If a patient declines this procedure, Dr. Cook would proceed with a cesarean delivery. (Tr. 1334-35, Test. Dr. Cook; Tr. 1700-01, Test. Dr. Lockwood (not necessary to use intact D & E to terminate pregnancy with fetal anomaly; for hydrocephaly, pregnancy could be terminated by medical induction, D & E, or intact D & E, which are all "acceptable" in this circumstance; fluid in fetal brain should be aspirated by cephalocentesis

before any termination procedure to ensure fetus is delivered without complications).)

Dr. Shadigian believes the intact D & E procedure is never necessary to terminate a pregnancy involving a fetal anomaly because "we have such other well studied techniques that work very effectively; both the D & E, and the medical induction are very well studied, and we know where the lines are that there are increased risks with one or the other." (Tr. 1521, Test. Dr. Shadigian.) For example, if the fetus's head is "very big with hydrocephaly, there is actually a procedure we can do to draw off the fluid around the baby's head, for the head to get a little bit smaller and make it easier to have the baby come out." (Tr. 1522, Test. Dr. Shadigan; *see also* Ex. 891, Test. Dr. Clark 2380 (in cases of hydrocephalis, labor induction or dismemberment D & E are available methods of second-trimester abortion; if head is very large, fluid can be suctioned out of fetal brain by cephalocentesis to allow delivery of fetal head).)

Further, Dr. Clark testified that the intact D & E is not necessary for diagnostic pathology of fetal anomalies. If the fetus is dismembered, data important to the diagnosis may be lost. The intact D & E removes the possibility of doing an autopsy on the fetal brain. Dr. Clark believes that medical induction is the best method of securing a fetal specimen for pathological diagnosis because the fetus remains entirely intact. (Ex. 891, Test. Dr. Clark 2394-95.) If labor induction cannot be safely performed due to the mother's physical circumstances, the intact D & E is an available option. Under these circumstances, Dr. Clark believes the Act would not ban the intact D & E, provided potassium chloride or digoxin were used to kill the fetus prior to

removal. Provided the amniocentesis is skillfully done, there are no risks associated with performing an intrauterine injection to carry out an abortion. In Dr. Clark's view, the risk to the mother is the same irrespective of whether the doctor induced fetal demise. (Ex. 891, Test. Dr. Clark 2395-97 & 2415.)

Dr. Shadigian used medical induction for a set of conjoined twins who were past 20 weeks and who were connected from the chest to the abdomen. "[T]he babies didn't have to be destroyed in any way. They just naturally died in the labor process."[81] (Tr. 1522, Test. Dr. Shadigian; *see also* Ex. 891, Test. Dr. Clark 2383 (depending on how they are attached, either labor induction or dismemberment D & E could be used to abort conjoined twins; in most cases, dismemberment is preferred).)

Dr. Cook believes that the safety of the intact D & E procedure cannot be proven by the plaintiffs' assertions that the procedure appears to be safe because it involves fewer instrument passes and does not require removing sharp fetal fragments from the uterus. When actually studied, medical techniques or drugs that appear to offer benefits may prove to be harmful, as evidenced by this country's experience with DES,[82] a drug used nationwide after noncontrolled study to prevent miscarriages, but later found to cause many complications, including vaginal cancer and genital tract abnormalities. (Tr. 1354-55, Test. Dr. Cook.) However, "an intact D & E or D & X procedure may be a

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[81] The mother of the conjoined twins later had a term birth under Dr. Shadigian's care. (Tr. 1522, Test. Dr. Shadigian.)

[82] DES is the abbreviation for diethylstilbestrol. *Stedman's Medical Dictionary* 483 & 499 (27th ed. 2000).